THE LEPIDOPTERA OF CEYLON.

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THE

LEPIDOPTERA OF CEYLON.

BY

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THE LEPIDOPTERA OF CEYLON.

Family CYMATOPHORIDÆ.

Imago of moderate size; body mostly smooth. Larva smooth, or with little eminences, living on trees or shrubs quite exposed, or between leaves united by silk. (*Stainton.*)

Genus RISOBA.

Risoba, Moore, Proc. Zool. Soc. 1881, p. 328; Desc. Lep. Coll. Atk. p. 90.

Allied to Thyatira. Forewing somewhat shorter; costal margin arched at end, angle acute, exterior margin less oblique; second subcostal branch trifurcate, its lowest fork (or fourth branch) near the apex, fifth branch curved upward from end of the cell, and touching the third near its base; discocellular obliquely concave, slightly bent at its lower end; upper radial straight from end of the cell, lower radial and upper median branch from angles close above end of the cell: hindwing very convex exteriorly; costal and subcostal veins joined together at their base, two subcostal branches from end of the cell, radial and upper median branch from end of the cell, middle median branch from angle before end of the cell. Body slender, thorax broad, crested in front; antennæ long, minutely pectinated in male.

RISOBA REPUGNANS (Plate 144, Fig. 1).

Thyatira repugnans, Walker, Catal. Lep. Het. B. M. ix. p. 9 (1856).
Risoba repugnans, Moore, Proc. Zool. Soc. 1881, p. 328.

Male: forewing purplish-brown, washed with silvery-grey; with a purplish-white basal oblique band, a spot on the middle of posterior margin, and another spot at the angle, also a large rounded spot at the apex, each with strongly defined black inner border, the former suffused and the latter blotched with purple-brown and traversed by a slender pale line; orbicular spot prominent, with a purple-brown centre and black-bordered line; a black dot in middle of the cell; two slender indistinct blackish denticulated lines cross the disc from the apical to posterior spots; a marginal row of small black spots: hindwing purplish-white, with a broad pale

purplish-brown outer band, and a slender blackish lunular marginal line. Body purplish-white; head, front of thorax, and tip of abdomen suffused with purplish-brown; front legs brown, with pale bands.

Expanse 1⅜ inch.

RISOBA OBSTRUCTA (Plate 144, Fig. 2, *2a*, *2b*, ♂ ♀, larva).

Risoba obstructa, Moore, Proc. Zool. Soc. 1881, p. 328; Desc. Lep. Coll. Atk. p. 91.
Bolina obstructa, Walker, MS. Brit. Mus. Cabinet.

Male and female: forewing greyish-brown, indistinctly black speckled; a white basal oblique slender band, which is slightly brownish hindward and has a black sinuous border: a discal greyish-white fascia bordered externally by an irregular black line; a black dot within the cell, and a circle enclosing another dot at its end; exterior border traversed by a broad blackish whitish-bordered indistinct band terminating at the apex in blacker streaks; a marginal row of black lunules bordered inwardly with white: hindwing pale cinereous-brown, with pale brown marginal band.

Expanse, ♂ 1, ♀ 1⅜ inch.

Larva purplish-brown, palest laterally; twelfth segment with a dorsal conical prominence; with dorsal and lateral white-dotted lines, and a sublateral row of whitish streaks; between the lateral and sublateral lines is a row of black dots. Pupa pale purplish-red; in a pale purplish-white narrow cocoon.

"Feeds on Quisqualis." (*Dr. Thwaites.*)

Family BRYOPHILIDÆ.

Imago of small size; body slender, crested above. Larva smooth, the ordinary spots warty and shining; feeds on lichens, on walls, &c., concealing itself during the day in little nests it forms in the chinks of the walls. (*Stainton.*)

Genus BRYOPHILA.

Bryophila, Treitschke, Schmett. Eur. i. p. 57 (1825); Guénee, Noct. i. p. 22; Walker; Lederer.
Metachrostis (part), Hübner, Verz. bek. Schmett. p. 204 (1818-25).
Pœcilia * (part), Schrank, Fauna Boica, ii. 2, p. 157 (1802); Hübner, *id.* p. 204.

Male. Forewing elongated, costa nearly straight, exterior margin slightly oblique and convex; cell narrow, long, extending two-thirds the wing; first subcostal emitted at one-half before end of the cell, second trifid, fifth from end of the cell, ascending and touching third mid-way between its base and the fourth; discocellular slightly bent close to upper end and near lower end, radials from the angles; three medians, middle branch from angle close to end of the cell, lower

* Previously used for a genus of Fishes.

branch at nearly one-half before the end; submedian slightly curved: hindwing narrow, costa almost straight, exterior margin oblique, convex, waved; costal vein slightly bent near the base, extending to apex, subcostal touching the costal at the angle near base, two subcostal branches from end of the cell; discocellular slightly bent below the middle, the radial from the angle; middle median from angle near end of the cell, lower median at nearly one-third before the end; submedian and internal vein straight. Body somewhat slender; palpi ascending, second joint thick, long, laxly squamose, rising to level of vertex, third joint slender, lanceolate, more than half length of second; antennæ simple; legs thickish, tibiæ stout, clothed with hairy scales, middle tibiæ with two, and hind tibiæ with four spurs.

Type, B. glandifera.

BRYOPHILA SEMIPARS.

Bryophila semipars, Walker, Catal. Lep. Het. Brit. Mus. xv. p. 1647 (1858).

"Testaceous-cinereous: forewings thickly speckled with black, excepting the middle third part, which is slightly speckled with black, has a zigzag black line on each side, and contains a brown costal spot and the reniform mark, which is distinguished by a deep black transverse streak; basal, interior, and submarginal lines testaceous-cinereous, zigzag, and distinct: hindwings cinereous-brown, with a pale denticulated line along the exterior border. Thorax thickly speckled with black; a black band along the fore border.

"Expanse 12 lines."

Family BOMBYCOIDÆ.

Imago of moderate size; body thick and hairy, sometimes crested above. Larva with the ordinary spots warty, and more or less tufted with hairs. (*Stainton.*)

Genus DIPHTHERA.

Diphthera, Hübner, Tentamen, p. 1 (1806); Ochsenheimer, Schmett. Eur. iv. p. 63 (1816).

Pœcilia * (part), Schrank, Fauna Boica, ii. 2, p. 157 (1802); Hübner, Verz. bek. Schmett. p. 204 (1818-25).

Moma, Lederer, Noct. Eur. p. 76 (*nec* Hübner).

Male. Forewing elongated; costa almost straight, exterior margin oblique, posterior margin slightly recurved; cell long, extending three-fifths the wing; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell and slightly touching third near its base; discocellular bent near upper and lower end, radials from the angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian slightly recurved: hindwing

* Previously used for a genus of Fishes.

somewhat short, slightly broad, exterior margin convex; costal vein almost straight, subcostal touching the costal near base; two subcostal branches from end of the cell, radial from middle of discocellular; middle median from angle at end of the cell, lower median at one-third before the end; submedian and internal vein straight. Body moderately stout; palpi ascending to level of the eyes, second joint thick, laxly clothed, third joint half its length, blunt at the tip; antennæ very slightly pectinated; legs stout, tibiæ thick, laxly clothed, middle and hind tibiæ spurred.

Type, D. Orion.

DIPHTHERA DECEPTURA.

Diphthera deceptura, Walker, Catal. Lep. Het. Brit. Mus. xxxii. p. 614 (1865).

"Male. White: forewing with numerous black, denticulated or undulating, very irregular, and more or less incomplete lines; base and middle part brown, the latter including a white space; marginal lunules black; fringe with blackish marks; orbicular and reniform marks white, black bordered, very large, the former round, the latter very much excavated: hindwings yellowish-cinereous, with two undulating lines and the exterior border diffusedly brown. Head with a black mark between the eyes; palpi brown in the middle part; thorax slightly speckled with black; abdomen and underside brownish-ochreous.

"Expanse 12 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

Genus HYBOMA.

Hyboma, Hübner, Verz. bek. Schmett. p. 200 (1818-25).

Male: forewing very moderately elongated, broad; costa slightly arched at the base, exterior margin oblique, convex, posterior margin convex near base; cell long, extending two-thirds the wing; first subcostal emitted at more than half before end of the cell, second at one-fourth, trifid, fifth from end of the cell and touching third near its base; discocellular concave in the middle, bent near lower end, radials from upper end and the lower angle; lower median at one-fourth and middle median from an angle close before end of the cell; submedian slightly curved: hindwing short, apex convex, exterior margin oblique, waved; costal vein extending to apex; subcostal touching the costal near its base; cell broad, long, extending beyond half the wing; two subcostals on a footstalk one-fifth beyond the cell; discocellular very convex, radial from below the middle; two upper medians from end of the cell, lower at nearly one-third before the end, submedian and internal slightly curved. Body moderate; palpi porrect, second joint extending half beyond the head, pilose, the hairs projecting forward, third joint cylindrical, half length of second; antennæ

minutely ciliated: legs rather long, tibiæ thickish, clothed with short hairs, middle with two short spurs and hind tibiæ with four long spurs.

Type, H. strigosa.

HYBOMA FASCIATA (Plate 144, Fig. 4, ♂).

Male: forewing vinaceous brownish-grey; with a blackish longitudinal fascia extending from base of wing below the cell to exterior margin above the angle, the fascia partly interrupted in the middle by a broad pale whitish posterior streak, and by two transverse antemedial pale-bordered blackish sinuous lines and two postmedial denticulated lines; some black marks along the costal edge; orbicular spot large, with a black outer line and pale inner border; reniform spot large, indistinct; a marginal pale-bordered blackish denticulated line; cilia alternated with black: hindwing pale cinereous-brown, with pale brownish outer border. Body cinereous brownish-grey; legs brown, with pale tarsal bands.

Expanse $1\frac{2}{8}$ inch.

Described and figured from specimens obtained from the collection of the late Dr. Thwaites.

Genus PLATAPLECTA.

Plataplecta, Butler, Annals of Nat. Hist. 1878, p. 195.

Forewing more elongated and narrower than in Hyboma; exterior margin more oblique; venation similar in both wings. Body stouter; palpi long, ascending to vertex, compactly squamose; legs stout; middle and hind tibiæ densely clothed with long hairy scales, spurs stout; antennæ setose.

PLATAPLECTA PRUINOSA (Plate 144, Fig. 3).

Acronycta pruinosa, Guénee, Noct. i. p. 53 (1852).
Polia soluta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 723 (1865).
Plataplecta soluta, Butler, Annals of Nat. Hist. 1878, p. 195.

Forewing cinereous-grey, minutely brown speckled; crossed by basal, subbasal and medial diffused blackish sinuous lines, a recurved discal more sharply defined duplex denticulated line, and a marginal row of lunular points; a slight blackish streak extends below the base of the cell and a more distinct streak from below the lower median vein; orbicular spot large, whitish; reniform spot large, defined by a slender blackish line: hindwing pale brownish-cinereous, darkest externally; cilia alternately white and pale brown. Body cinereous-grey, palpi with dark brown lateral band; tarsi with brown bands.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{5}{8}$ inch.

Family LEUCANIIDÆ.

Imago small or of medium size, body smooth. Larva long, feeding in stems of reeds, &c., or merely concealed, but then they are marked with numerous fine lines. Pupa either in a subterranean cocoon, or in the stem in which the larva has fed. (*Stainton.*)

Genus ALETIA.

Aletia, Hübn. Verz. bek. Schmett. p. 239 (1818-25).
Hyphilare, Hübn. *id.* p. 239.
Mythimna (part), Stephens.
Leucania (part), Lederer, Noct. Eur. p. 127 (1857).

Forewing elongated, narrow, costa almost straight, apex acuminate, exterior margin slightly oblique, posterior angle somewhat rounded; cell long, narrow, extending two-thirds the wing; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell, touching the third beyond the cell; discocellular slender, concave in middle, upper radial in a line with subcostal, lower from angle close to lower end; middle median from angle close to end of the cell, lower median at nearly one-third before the end; submedian recurved from the base: hindwing short, broad, exterior margin convex; cell extending half the wing; costal vein undulated; subcostal touching the costal near its base, two subcostal branches from end of the cell; discocellular extremely slender, concave, radials from upper end and below the middle; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein slightly curved. Body stout, abdomen extending beyond hindwing; palpi short, thick, porrect, laxly squamose, second joint extending beyond the head, third joint short, thick, conical; antennæ minutely ciliated; legs long, middle and hind tibiæ spurred. (*A. vitellina.*)

ALETIA REVERSA (Plate 144, Fig. 5).

Male: forewing pale purpurescent ochreous-brown, darkest from the base below the costal border; crossed by an indistinct black basal sinuous line, a duplex antemedial outwardly oblique straight line and a postmedial inwardly oblique curved duplex denticulated black line with white points; a slight pale-bordered streak extending obliquely from the apex; an indistinct round orbicular spot, and a prominent reniform mark with a blackish central streak and whitish lower streak; the two upper median branches also slightly whitish: hindwing cinereous-brown at the base, the outer border pale purplish ochreous-brown. Body above pale purplish ochreous-brown. Female duller coloured; with the markings on forewing less distinct.

Expanse $1\frac{2}{8}$ to $1\frac{3}{8}$ inch.

Genus AXYLIA.

Axylia, Hübner, Verz. bek. Schmett. p. 242 (1818-25).

Forewing elongate, narrow, exterior margin slightly oblique; cell long, extending to two-thirds the wing; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, the third from below second at one-half from its base, and fourth at nearly one-half from base of third, fifth from end of the cell, extending upward and touching the third near its base; discocellular concave, bent at its lower end, upper radial emitted from below fifth subcostal at some distance beyond end of the cell; middle median from angle close to end of the cell, lower median at one-third before the end; submedian much curved from the base: hindwing broad, exterior margin convex, waved; costal vein straight, extending to apex; subcostal slightly joined to costal near its base, two subcostal branches on a footstalk beyond end of the cell; discocellular deeply concave in the middle, radial from below the middle; cell broad, extending to half the wing; two upper medians from a footstalk beyond the cell, lower median at one-fourth before end of the cell; submedian straight, internal curved. Body moderately stout, short; palpi porrect, extending half beyond the head, third joint short, stout, conical; antennæ minutely ciliated; legs short, thick, compactly clothed, middle tibiæ with two, and hind tibiæ with four spurs.

Type, A. putris.

AXYLIA FASCIATA (Plate 144, Fig. 6).

Axylia fasciata, Moore, P. Z. S. 1881, p. 341.

Forewing pale brownish-ochreous, with a longitudinal blackish fascia extending through the lower part of the cell to outer margin, the area below it being slightly greyish; a black streak below the cell; median veins grey speckled, the second and upper median branch white with black intervening lines; discal area above the fascia and the posterior margin suffused with reddish-ochreous, and white below the fascia; orbicular and reniform marks formed of interrupted black spots with an almost confluent black interspace; some indistinct black dots obliquely across the disc: hindwing ochreous-white; outer border slightly dusky; marginal line black. Head and thorax brownish-ochreous, abdomen whitish-ochreous; a hoary collar on thorax.

Expanse $1\frac{2}{10}$ inch.

Genus SESAMIA.

Sesamia, Guénee, Noct. i. p. 95 (1852); Walker, Catal. Lep. Het. B. M. ix. p. 114.

Male: forewing elongated; costa straight, exterior margin very slightly oblique, posterior angle rounded; cell long, extending nearly two-thirds the wing; first subcostal emitted at two-fifths before end of the cell, second at one-eighth, trifid, fifth from end of the cell and touching the third above end of the cell; discocellular

very slender, concave, radials upper end and near lower end ; lower median at about one-third and middle median from a short distance before end of the cell ; submedian much curved near the base : hindwing short, costa almost straight, apex slightly produced, exterior margin very oblique, undulated ; costal vein extending to apex ; two subcostals on a footstalk at a short distance beyond end of the cell ; discocellular concave, radial from the middle ; cell broad, extending to half the wing ; two upper medians from end of the cell, lower at one-third before the end ; submedian and internal vein straight. Body moderate, abdomen extending beyond hindwings ; palpi porrect, second joint laxly pilose, extending beyond the head, third joint short, thick, conical ; antennæ finely bipectinated ; legs short, thick, fore tibiæ densely clothed, middle and hind tibiæ thick, spurred.

Type, S. nonagrioïdes.

SESAMIA INFERENS (Plate 145, Fig. 3).

Sesamia inferens, Walker, Catal. Lep. Het. B. M. ix. p. 105 (1856).

Forewing dull yellowish-ochreous, with a longitudinal ochreous-brown fascia extending from the base along the median vein to the exterior margin ; a brown exterior marginal line : hindwing white. Thorax dull yellowish-ochreous ; abdomen paler ; legs dull brownish-ochreous.

Expanse $1\frac{2}{10}$ inch.

Genus ARSILONCHE.

Arsilonche, Lederer, Noct. Eur. pp. 64, 70 (1857).
Simyra (part), Ochsenheimer.

Male : forewing elongated, costa nearly straight, apex acute, exterior margin oblique, posterior angle rounded ; cell extending nearly two-thirds the wing ; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell, and touching the third near its base ; discocellular bent at upper end, concave in the middle, radials from upper and lower angles ; middle median from angle close to end of the cell, lower at about one-fourth before the end ; submedian much curved : hindwing short, broad, exterior margin convex below the apex ; cell narrow, long, extending to more than half the wing ; costal and subcostal joined at the base ; two subcostal branches on a footstalk at a short distance beyond end of the cell ; discocellular slender, oblique, concave, radial from near lower end ; middle median from angle close to end of the cell, lower at one-third before the end ; submedian and internal straight. Body stout ; palpi porrect, very laxly pilose, projecting a little beyond the head, third joint very short, thick and almost imbedded in hairs ; antennæ thick at the base, tapering to the tip, flattened and scabrous ; legs short, tibiæ thick, hairy, middle and hind tibiæ spurred. (*Type*, A. venosa.)

ARSILONCHE CONFUSA (Plate 145, Fig. 4).

Leucania confusa, Walker, Catal. Lep. Het. B. M. ix. p. 105 (1856).

Forewing pale brownish-ochreous, numerously covered with pale brown scales; two or three indistinct blackish dots at upper end of the cell: hindwing ochreous-white. Head, thorax, and legs pale brownish-ochreous; abdomen above ochreous-white.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{3}{8}$ inch.

Genus LEUCANIA.

Leucania, Ochsenheimer, Schmett. Eur. iv. p. 81 (1816); Samouelle, Ent. U. Comp. p. 251 (1819); Hübner, Verz. bek. Sch. p. 241; Stephens; Walker.

Donachlora, Sodoffsky, Bull. Soc. Imp. Mosc. 1837, p. 14 (1837).

Forewing elongated, costa straight, slightly acuminate at tip, exterior margin slightly oblique; cell narrow, extending nearly two-thirds the wing; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell, touching third nearly half-way between its base and the fourth; discocellular slightly concave, radials from upper end and near the lower end; middle median from an angle close to end of the cell, lower median at one-fourth before the end; submedian recurved: hindwing short, broad, apex rounded, exterior margin undulated; cell broad, extending to half the wing; costal vein slightly undulated, extending to apex, subcostal joined to costal near the base, two subcostal branches from end of the cell; discocellular slender, deeply concave, radial from the middle; two upper medians from end of the cell, lower median at one-third before the end; submedian and internal vein straight. Body stout, thorax laxly clothed; palpi short, stout, laterally broad, pilose, extending beyond the head, third joint short, conical; antennæ minutely ciliated; legs stout, tibiæ pilose, middle tibiæ with two and hind tibiæ with four spurs. (*L. comma.*)

LEUCANIA SEPARATA.

Leucania separata, Walker, Catal. Lep. Het. B. M. xxxii. p. 626 (1865).
Leucania extranea (var. A), Guénee, Noct. i. p. 78.

Forewing very pale brownish-ochreous, sparsely speckled with indistinct pale brown scales; two small black dots with an intervening white dot at lower end of the cell; two recurved discal rows of indistinct minute black points, the outer row with one on each vein, the inner row with one between the veins, the latter row being the most indistinct; a marginal row of black dots: hindwing whitish-ochreous at the base, increasing to pale ochreous-brown along exterior border; cilia whitish. Thorax, head, and legs brownish-ochreous; palpi and forelegs brown speckled; abdomen pale ochreous-brown.

Expanse, ♂ $1\frac{5}{8}$, ♀ $1\frac{7}{8}$ inch.

LEUCANIA DECISSIMA.

Leucania decissima, Walker, Catal. Lep. Het. B. M. xxii. p. 624 (1865).
Leucania Nareda, Felder et Rogen. Nov. Voy. Lep. iv. pl. 109, fig. 9 (1874).

Forewing pale brownish-ochreous, with slender ochreous-brown lines between the veins, which are darkest and form an ill-defined fascia from base of the cell, the fascia widening from its end upward to the apex; a similar fasciated streak also extending obliquely from the apex to posterior margin; veins pale ochreous; median vein with a dark-bordered white streak, which is bent upward at end of the cell, median branches also whitish; the angled end of streak with external black dots; three or four black dots along the costa, and one on submedian; a transverse discal curved series of black points, and a marginal row of dots: hindwing pale ochreous at the base and pale cuprescent-brown externally; cilia pale ochreous-white. Underside of both wings brilliantly gilded with pale golden scales, the marginal black dots, and a spot before the apex distinct.

LEUCANIA LANCEATA (Plate 145, Fig. 5).

Leucania lanceata, Moore, P. Z. S. 1881, p. 340.

Forewing pale yellowish-ochreous, with dark brownish-ochreous lines between the veins, which are somewhat confluent through the middle and form an indistinct interrupted fascia below the cell to exterior margin below the apex; a suffused blackish spot outside end of the cell; the cell-streak broad, nearly white and crossed near its inner end by a lanceolate black mark, the cell beyond bordered beneath by a slight black line; some minute black speckles on the costal border; a distinct series of black spots curving across the disc, and a marginal row of points: hindwing pale whitish-ochreous, with brownish-ochreous broad outer border, and a marginal row of black points; cilia pale ochreous. Body and legs brownish-ochreous. Underside pale yellowish-ochreous, sparsely brown speckled, marginal black dots and precostal spot distinct. Discal area of forewing suffused with brown; a discal transverse row of brown spots on hindwing.

Expanse $1\frac{3}{10}$ inch.

LEUCANIA PRISCA.

Leucania prisca, Walker, Catal. Lep. Het. Brit. Mus. xxxv. p. 1953 (1866).

"Female. Pale fawn colour: forewings with the veins mostly whitish; median vein and inferior veins brown-speckled; two incomplete oblique lines of blackish points; an indistinct oblique brownish streak proceeding from the tip of the disc; marginal points blackish; fringe cinereous, interlined with fawn colour: hindwings cinereous. Palpi porrect, slightly pilose, hardly extending beyond the head, third

joint acute, minute; fore tegulæ of the thorax with erect hairs; legs stout, tibiæ fringed.

"Expanse 18 lines."

LEUCANIA TANGALA.

Leucania Tangala, Felder and Rogenhofer, Reise Novara, Lep. iv. pl. 109, fig. 12 (1874).

Male. Upperside: forewing pale pinkish-ochreous, with purplish-ochreous longitudinal streaks, the median vein and its upper branches lined with white; a transverse discal row of four small black dots: hindwing pale brownish-ochreous. Thorax pale pinkish-ochreous, abdomen pale yellowish-ochreous.

Expanse 1¼ inch.

Described from the figure quoted above.

LEUCANIA EXEMPTA.

Leucania exempta, Walker, Catal. Lep. Het. Brit. Mus. xi. p. 710 (1857).

"Male. Pale testaceous: forewings slightly speckled with black in front, with a white stripe, which extends along the costa for more than half the length and for nearly half the breadth, contains a black dot, and joins a fawn-coloured spot at its tip; exterior and marginal dots black: hindwings whitish, with brownish borders and black marginal dots.

"Expanse 14 lines."

Genus SENTA.

Senta, Stephens, Illust. Brit. Ent. Haust. iv. p. 297 (1834); Guénee, Noct. i. p. 98; Walker, Catal. Lep. Het. B. M. ix. p. 117; Lederer, Noct. Eur. p. 122.

Male. Forewing elongate, rectangular, narrow, costa slightly arched, apex acute, exterior margin oblique, slightly angular in the middle, posterior margin slightly convex; cell disposed towards the middle, narrow, extending to nearly two-thirds the length; costal vein at a wide distance from the margin; first subcostal emitted at nearly two-thirds before end of the cell, second at more than one-fourth, trifid, the fifth from end of the cell and touching third near its base above end of the cell; discocellular concave in the middle, bent near lower end, radials from the upper end and lower angle; middle median from angle close to end of the cell, lower median at one-third before the end; submedian slightly curved: hindwing somewhat long, narrow, costa nearly straight, exterior margin recurved from the apex, anal margin convex; costal vein extending to apex; two subcostal branches at one-fourth beyond end of the cell; discocellular extremely slender, obliquely concave, radial from the middle; cell extending to half the wing; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body

slender, abdomen extending beyond the hindwings; palpi porrect, laxly squamose, second joint projecting beyond the head, third joint short, one-fourth length of the second, lanceolate; legs long, slender, middle tibiæ with two and hind tibiæ with four spurs; antennæ slender, simple.

Type, S. Ulvæ.

SENTA CRAMBOIDES (Plate 145, Fig. 6).

Male and female: forewing pale brownish-ochreous; veins pale lined, with brownish-ochreous intervening lines; some indistinct black dots at inner end of the cell and between base of the median branches; an indistinct black short streak midway between the radials, and a marginal row of black points: hindwing pale brownish ochreous-white. Body pale brownish-ochreous; palpi and front legs ochreous-brown. Underside very pale brownish-ochreous; hindwing the palest.

Expanse, ♂ 1, ♀ $1\frac{2}{8}$ inch.

In Mr. F. M. Mackwood's Collection.

Genus CRAMBOPSIS.

Crambopsis, Walker, Catal. Lep. Het. Brit. Mus. xxxii. p. 634 (1865).

"Female. Wings long, moderately broad: forewings hardly convex along the costa, very acute at the tips; exterior margin slightly convex, very oblique. Body stout; palpi short, porrect, densely clothed; antennæ simple; legs stout, posterior tibiæ fringed; spurs long."

CRAMBOPSIS EXCLUDENS.

Crambopsis excludens, Walker, Catal. Lep. Het. Brit. Mus. xxxii. p. 634 (1865).

"Female. Fawn colour. Forewings very thinly and minutely speckled with black; lines pale brownish, denticulated, very indistinct; marginal points black; reniform mark distinguished by a pale black-bordered point: hindwings cinereous-brown. Underside cinereous-brown.

"Expanse 25 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

Family GLOTTULIDÆ.

Imago generally with rather broad wings; body mostly stout, smooth. Larva thick, smooth, or slightly warty; feeds at the roots of bulbous plants. Pupa subterranean.

Genus POLYTELA.

Polytela, Guénee, Noct. i. p. 113 (1852); Walker, Catal. Lep. Het. B. M. ix. p. 138.

Male. Forewing elongated, narrow, costa straight, apex rounded, exterior margin oblique; cell narrow, extending two-thirds the wing; first subcostal emitted at two-fifths before end of the cell, second at one-eighth, trifid; fifth from end of the cell and touching third near its base; discocellular concave, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at about one-third before the end; submedian recurved: hindwing short, apex convex, exterior margin undulated; costal and subcostal joined at the base, two subcostals on a footstalk at one-fourth beyond the cell; discocellular slender, obliquely concave, radial from below the middle; cell broad, extending to half the wing; two upper medians from end of the cell, lower at one-third before the end; submedian and internal straight. Body moderately stout, abdomen extending a little beyond the hindwings; palpi short, stout, compactly pilose, third joint short, thick; antennæ minutely ciliated; legs stout, middle and hind tibiæ spurred.

Type, P. gloriosa.

POLYTELA GLORIOSÆ (Plate 145, Fig. 1, ♀, 1*a*, larva).

Bombyx gloriosæ, Fabricius, Spec. Ins. ii. p. 205 (1781); Ent. Syst. iii. 1, p. 484.
Polytela gloriosæ, Guénee, Noct. i. p. 113, pl. 4, fig. 2 (1852); Walker, Catal. Lep. Het. B. M. ix. p. 138.

Forewing purplish greyish-black; with a golden-yellow streaked black transverse subbasal band, an antemedial angulated duplex band, and a recurved discal sinuous band, the antemedial band with a black outer lobe beneath the cell; a purple-red bordered black spot across the submedian vein between the two inner bands; outer discal area with a transverse series of longitudinal purple-red bordered black spots terminating in a yellowish-white patch at the apex and posterior angle, and with an intervening connecting yellow sinuous line traversing the black spots; a small orbicular whitish spot with black centre and outer ring; reniform spot large, whitish, with black and purple-red central streak; a small yellow spot at base of the wing, and yellow spots along the costal edge; cilia with inner row of alternate black and yellow spots: hindwing purplish cinereous-brown; cilia yellow. Body purplish-black; head and thorax above spotted with yellow, anal segment also yellow; palpi and legs banded with yellow.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{1}{8}$ inch.

Larva elongated, smooth, purple-black; with dorsal, lateral, and sublateral rows of pure white spots, and a purplish blotch on sides of second, third, fourth, eleventh, and twelfth segments; head, a dorsal spot on second segment, and legs, red. Pupa red.

"Feeds on Amaryllis." (*Dr. Thwaites.*)

Genus GLOTTULA.

Glottula, Guénee, Ann. Soc. Ent. France, vi. p. 357 (1837); Noct. i. p. 114; Walker, Catal. Lep. Het. B. M. ix. p. 139.

Male. Forewing elongated; costa straight, apex rounded, exterior margin oblique, posterior angle convex; cell narrow, long, extending nearly two-thirds the wing; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, fifth from end of the cell and touching third near its base; discocellular inwardly oblique, bent in the middle, radials from upper end and below the middle; middle median from angle close to end of the cell, lower at nearly one-third before the end; submedian curved: hindwing short, exterior margin convex; cell broad, upper end extending to beyond one-half the wing; two subcostal branches from end of the cell; discocellular inwardly oblique, very slender, radial from below the middle, very slender; two upper medians from immediately beyond end of the cell, lower at one-fourth before the end; submedian and internal straight. Body stout, thorax thick; palpi short, porrect, extending slightly beyond the front, pilose, third joint very short, thick; antennæ short, thick and flattened from the base, scabrous; legs thick, middle and hind tibiæ spurred.

Type, G. Pancratii.

GLOTTULA DOMINICA (Plate 145, Fig. 2, ♂, 2*a*, larva).

Phalæna Noctua Dominica, Cramer, Pap. Exot. iv. p. 238, pl. 399, fig. H (1782).
Glottula Dominica, Guénee, Noct. i. p. 116 (1852); Walker, Catal. Lep. Het. B. M. ix. p. 141.

Forewing dark greyish violaceous-brown; discal area suffused with ochreous, and with a transverse submarginal slightly ferruginous-bordered ochreous denticulated line; across the middle are two black greyish-bordered sinuous lines with more or less acute greyish points on the veins; orbicular spot very indistinct; reniform spot pale, indistinctly formed, with ferruginous and black-streaked centre; a marginal grey-bordered black denticulated line: hindwing cinereous-white in male, slightly brownish along anterior border, and brownish externally in female. Thorax, head, and legs dark greyish violaceous-brown, abdomen dark cinereous-brown.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{5}{10}$ inch.

Larva thick, warty; second to eleventh segment black, spotted with bluish-white; head, top of second segment, and the two anal segments red, with black spots; legs red; forelegs black tipped. Pupa purplish-brown.

"Feeds on Amaryllis." (*Dr. Thwaites.*)

Family APAMIIDÆ.

Imago of small or medium size; forewings in repose roof-shaped; abdomen generally smooth, sometimes crested. Larva thick, dull coloured, generally shining;

head small, retractile; living concealed either at the roots of plants or under low herbage, or in stems. (*Stainton.*)

Genus HYDRÆCIA.

Hydræcia, Guénee, Ann. Soc. Ent. Fr. x. p. 237 (1841); Dupont. Catal. Meth. Eur. Lep. p. 114 (1844); H. Schæff. Sch. Eur. ii. p. 220 (1845).

Forewing elongated, rather broad, apex acute, exterior margin oblique, convex hindward; cell extending three-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end of the cell, curved upward and touching the third close to its base; discocellular concave, radials from the upper and near lower end; middle median from angle near end of the cell, lower at one-fourth before the end; submedian curved: hindwing short, apex rather pointed, exterior margin very oblique; cell broad, extending to half the wing; two subcostals from end of the cell; discocellular concave, radial from below the middle; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body stout; palpi porrect, laterally broad, laxly pilose beneath, third joint short, thick; antennæ serrated, finely pectinated; legs thick, compactly pilose, middle and hind tibiæ spurred.

Type, H. micacea.

HYDRÆCIA LAMPADIFERA.

Hydræcia lampadifera, Walker, Catal. Lep. Het. B. M. xxxii. p. 643 (1865).

"Male. Fawn colour: forewings with a very large brown pale-borderd curved discal mark, which is concave towards the costa, and is there accompanied by a pale-bordered brown dot; submarginal line straight, oblique, brown, diffuse on the inner side, pale bordered on the outer side: hindwings cinereous. Abdomen and underside testaceous. Palpi erect, applied close to the head, but not ascending to the vertex, third joint conical, not more than one-fourth the length of the second.

"Expanse 14 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

Genus SASUNAGA.

Sasunaga, Moore, Proc. Zool. Soc. 1881, p. 342; Desc. Lep. Coll. Atk. p. 105.

Forewing very narrow; costa almost straight; exterior margin oblique, convex, waved; posterior margin convex at the base; costal vein extending two-thirds the margin; first subcostal branch emitted at two-thirds and second at one-fourth before end of the cell, third branch one-third and fourth at one-half from below second, fifth curving from end of the cell and free from the third; upper radial from end of the cell; discocellular obliquely concave, lower radial from near its middle; cell long,

very narrow at the base; upper median branch from angle above end of the cell, middle branch from the end, lower at one-fourth before the end; submedian curved downward near the base: hindwing very broad, triangular; costa convex near the base, apex convex; exterior margin very oblique, waved; abdominal margin long; costal vein slightly arched near the base, extending to apex; two subcostal branches from end of the cell; discocellular slender, concave; radial very slender, emitted from below middle of discocellular; cell short, broad; two upper median branches from end of the cell, lower at one-fourth before the end; submedian and internal vein straight, the latter extending to anal angle. Thorax robust, abdomen long, somewhat slender and extending beyond the wing; palpi ascending, slender, second joint squamose, reaching to vertex; third joint half its length, cylindrical; femora pilose beneath, tibiæ tufted above; antennæ setose.

Near to Dipterygia. The American genus Magusa (Walker, Catal. Lep. Het. B. M. xi. p. 762) is a very closely allied form.

SASUNAGA TENEBROSA (Plate 145, Fig. 7).

Hadena tenebrosa, Moore, Proc. Zool. Soc. 1867, p. 59.

Sasunaga tenebrosa, Moore, Proc. Zool. Soc. 1881, p. 343; Desc. Lep. Coll. Atk. p. 106.

Forewing dark brown, with short ochreous-bordered blackish costal streaks, lengthened longitudinal upper discal and less distinct lower discal streaks, and oblique streaks below the cell, the latter bordered by an ascending lower discal curved duplex sinuous pale-pointed black line, and a submarginal less distinct pale-pointed sinuous line; the ochreous borders palest before the apex; orbicular spot small, ochreous with black border, reniform spot less distinct: hindwing glossy cupreous-brown, palest at the base; cilia cinnamon-brown. Thorax dark brown, black speckled; abdomen pale brown, tuft ochreous; palpi and legs ochreous, brown speckled; tarsi with blackish bands.

Expanse, ♂ $1\frac{4}{8}$, ♀ $1\frac{5}{8}$ inch.

Remark.—Some specimens of this insect are pale ochreous-brown, with less distinct darker brown and black streaks, and also show a darker subapical costal patch.

Genus DYPTERYGIA.

Dypterygia, Stephens, Syst. Catal. Brit. Ins. ii. p. 77 (1829); Illust. Brit. Ent. Haust. ii. p. 167 (1829).

Male: forewing elongate, moderately broad, exterior margin oblique, convex, and slightly scalloped above the angle; first subcostal emitted at two-fifths before end of the cell, second at one-eighth, trifid, fifth from end of the cell and by a very short spur touching extreme base of third; discocellular concave, radial from upper and near lower end; middle median from angle close to end of the cell, lower at

one-third before the end; submedian recurved: hindwing short, apex convex; two subcostals from end of the cell; discocellular slightly concave, bent below the middle, radial from the angle; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body moderately stout; palpi ascending, second joint reaching level of the eyes, loosely clothed, third joint short, cylindrical; antennæ setose; legs stout, spurred. (*D. pinastri.*)

DYPTERYGIA SUBCURVA (Plate 145, Fig. 8).

Hadena subcurva, Walker, Catal. Lep. Het. B. M. xi. p. 592 (1857), ♂.
Hadena postica, Walker, *id.* p. 594, ♀.

Male: forewing blackish purplish-ferruginous; crossed by subbasal and antemedial outwardly oblique sinuous duplex black lines, and similar discal lines which are outwardly angulated at the median vein; a submarginal series of longitudinal black streaks which are most distinct on middle of the exterior border; two marginal rows of indistinct ferruginous dots; between the lines across the middle are two indistinct less sinuous blackish lines; orbicular and reniform spots indistinct: hindwing cupreseent-brown, paling to cinereous at the base; cilia edged with cinereous-white below the apex and at anal angle. Body blackish-ferruginous, sides of abdomen cinereous-brown; legs with pale bands. Female paler: forewing with a ferruginous-white broken patch at the posterior angle, and some speckles along the exterior margin.

Expanse $1\frac{2}{10}$ inch.

Genus LAPHYGMA.

Laphygma, Guénee, Noct. i. p. 156 (1852).
Telmia (part), Hübner, Verz. bek. Schmett. p. 227 (1818-25).

Male: forewing elongated, narrow; cell extending two-thirds the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end of the cell, ascending and slightly touching third near its base; discocellular concave, radials from upper and near lower end; middle median from angle close to end of the cell, lower at one-fourth; submedian recurved: hindwing rather long, narrow, apex convex, exterior margin obliquely recurved; two subcostals from end of the cell; discocellular concave, radial from below the middle; two upper medians on a footstalk beyond end of the cell, lower at about one-third before end of the cell; submedian and internal vein straight. Body moderately slender; palpi thick, ascending, squamose; apical joint minute, conical; antennæ slender, minutely ciliated; legs slender, long, middle and hind tibiæ with long spurs. (*L. exigua.*)

LAPHYGMA OBSTANS.

Laphygma obstans, Walker, Catal. Lep. Het. B. M. xxxii. p. 653 (1865).

"Male. Ferruginous-brown: forewings blackish-brown, with black broadly

ferruginous-bordered denticulated and undulating lines; interior and exterior lines very remote from each other; submarginal line ferruginous, undulating, incomplete, partly double; marginal festoon black, with a ferruginous outer border; orbicular and reniform marks ferruginous, black bordered, very large, and near each other, the latter very slightly excavated: hindwings white, semi-hyaline; marginal line brown. Abdomen cinereous, with brownish crests towards the base; third joint of palpi conical, not more than one-fourth length of the second; antennæ stout, minutely serrated, each tooth with a minute tuft of hairs.

"Expanse 11 to 12 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

LAPHYGMA TRAJICIENS.

Laphygma trajiciens, Walker, Catal. Lep. Het. B. M. xxxii. p. 653 (1865).

"Male. Very pale fawn colour above, whitish-testaceous beneath: forewings with the lines blackish-brown, slight, denticulated, pale bordered; submarginal line pale, interrupting some black submarginal streaks; marginal points black; orbicular and reniform marks pale, large, the former round, the latter hardly excavated, with its disc mostly blackish-brown; some blackish marks along the costa: hindwings white, opaline. Third joint of palpi conical, not more than one-fourth the length of second; antennæ thickly setose.

"Expanse 10 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

Genus PRODENIA.

Prodenia, Guénee, Noct. i. p. 159 (1852); Walker, Catal. Lep. Het. B. M. ix. p. 191.

Male: forewing elongate, rather narrow, exterior margin oblique, posterior margin recurved; cell narrow, extending to three-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, fifth from end of the cell, touching the third for some distance near the base; discocellular concave, bent close to lower end, radial from upper end and lower angle; middle median from angle close to end of the cell, lower at one-fourth before the end; submedian recurved: hindwing short, apex convex, exterior margin oblique and slightly convex in the middle; two subcostals from end of the cell; discocellular concave in the middle, radial from below the middle; two upper medians from end of the cell; lower at nearly one-third before the end. Body stout; palpi laxly squamose, second joint thick, third joint thick and conical; antennæ slender, ciliated; legs stout, spurred.

Type, P. retina.

PRODENIA LITTORALIS (Plate 146, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Hadena littoralis, Boisduval, Faun. Ent. Madag. Lep. p. 91, pl. 13, fig. 8 (1834), ♀.
Neuria retina, Freyer, Beitr. Schmett, v. p. 161, pl. 478, fig. 2, 3 (1846), ♂ ♀; H. Schæff. Eur. Schmett. ii. p. 292, pl. 29, f. 144-5, ♂ ♀.
Prodenia retina, Guénee, Noct. i. p. 163; Walker, Catal. Lep. Het. B. M. ix. p. 192.
Prodenia ciligera, Guén. *id.* p. 164 (1852), ♂ ♀.
Prodenia testaceoides, Guén. *id.* p. 165, pl. 6, fig. 7, ♂.
Prodenia glaucistriga, Walker, Catal. Lep. Het. B. M. ix. p. 197 (1856), ♂.
Prodenia subterminalis, Walker, *id.* p. 196, ♀.
Prodenia declinata, Walker, *id.* xi. p. 723, ♂.

Male: forewing purplish greyish-brown, the veins from the base to the disc lined with purplish-white; along the costa are some short white oblique streaks with black borders; a white line extends from the base below the cell and curves upward to the subcostal vein, beyond which is a transverse antemedial angulated white line, the lower end of which is bent inward; within the cell is a prominent large outwardly oblique purplish-white streaked orbicular mark, the end of which is suffusedly continued below the cell; reniform mark large, purplish-white lined and with brown centre; across the disc is a zigzag lunular white line; all the lines and marks having blackish borders: from the apex across the outer discal area is an oblique purplish-grey fascia, which is interruptedly traversed by black streaks between the veins; along the marginal border are two whitish lunular lines and a blackish denticulated outer line; the area between the medial and discal transverse lines is of a pale ochreous-brown: hindwing purplish opalescent-white, apical border brownish, the veins lined with pale brown. Female: forewing purplish ochreous-brown, with less distinct markings as in male, and all of a pale purplish ochreous-brown; below the orbicular mark is a small sagittate black mark.

Expanse $1\frac{3}{8}$ to $1\frac{5}{8}$ inch.

Larva pale violet-brown, with a subdorsal row of narrow yellow spots bordered above by black lunules; a lateral row of violet-black spots centred by a white dot, below which is a sublateral white-dotted line. Pupa pale reddish, the head olivaceous.

"Feeds on Lantana, &c." (*Dr. Thwaites.*)

PRODENIA NUBES.

Spodoptera nubes, Guénee, Noct. i. p. 155 (1852), ♂.
Spodoptera filium, Guén. *id.* p. 155, ♀.
Prodenia infecta, Walker, Catal. Lep. Het. B. M. ix. p. 196 (1856).
Prodenia insignata, Walker, *id.* ix. p. 197.
Agrotis transducta, Walker, *id.* x. p. 344 (1856), ♀.
Laphygma squalida, Walker, *id.* xxxii. p. 652 (1865), ♂.
Prodenia venustula, Walker, *id.* xxxii. p. 654, ♀.
Agrotis submarginalis, Walker, *id.* xxxii. p. 699, ♀.
Prodenia permunda, Walker, *id.* xi. p. 723 (1857), ♀.

Male: forewing violaceous greyish-brown; with a transverse grey-bordered black

sinuous subbasal line, an antemedial and a postmedial line, a more distinct submarginal grey-bordered line with acutely prolonged inner black points, and a marginal row of black dots; orbicular spot greyish-ochreous, with slight black centre and black outer ring; reniform spot with black ring and large black centre; a slight greyish oblique lower streak between the two spots: hindwing purplish opalescent-white, veins externally and marginal line brown. Female: forewing mottled greyish-brown, with the markings less defined: hindwing as in male. Thorax, head, palpi, and legs violaceous greyish-brown, abdomen paler; palpi and tarsi with black bands.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{6}{10}$ inch.

PRODENIA APERTURA.

Prodenia apertura, Walker, Catal. Lep. Het. B. M. xxxii. p. 654 (1865).

"Male. Fawn colour above, mostly whitish beneath: forewings shaded with cinereous about the middle part of the exterior border and about that of the interior border; lines black, pale bordered; basal line as usual, interior line angular, contiguous to an elliptical incomplete black ringlet on its outer side, and on its inner side to a black angular mark by the interior border; exterior line undulating, bent; some blackish streaks between it and the exterior border; a white longitudinal line which commences at the interior line, is forked near the exterior line, and proceeds along two veins to the border; orbicular and reniform marks large, pale, the former black bordered, the latter containing two black points: hindwings white. Abdomen pale testaceous; palpi porrect, third joint less than half the length of the second; thorax brownish on each side, and with two brown lines in front. Expanse 10 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection. It is probably a female of *P. littoralis*.

Genus CALOGRAMMA.

Calogramma, Guénee, Noct. i. p. 165 (1852); Walker, Catal. Lep. Het. B. M. ix. p. 198.

Forewing long, narrow, apex rounded, exterior margin obliquely convex; cell narrow, extending to more than half length of the wing; first subcostal vein emitted at one-half before end of the cell, second at one-sixth, trifid, third from near base of second above end of the cell, fourth at nearly one-half from base of third, fifth from end of the cell, curved upward and joined to third for a short distance; discocellular concave, radials from upper and lower ends; middle median from near end of the cell, lower at two-fifths before the end; submedian recurved: hindwing short, broad; costal and subcostal touching near their base; two subcostals from end of the cell; discocellular bent slightly in the middle, radial from below the angle; two upper medians from end and lower at one-third before end of the cell; submedian and internal vein straight. Body stout, abdomen long, extending much beyond the

hindwings; palpi short, thick, porrect, first and second joints laxly squamose beneath, second joint thick, third joint short, conical; antennæ minutely pectinated in male, setose in female; legs stout, middle and hind tibiæ with long spurs.

CALOGRAMMA FESTIVA (Plate 146, Fig. 6).

Noctua festiva, Donovan, Epit. Ins. New Holl. (1805).
Calogramma festiva, Walker, Catal. Lep. Het. B. M. ix. p. 198 (1856).
Polia picta, Boisd. Voy. Astrol. I. Lep. p. 241 (1832).
Noctua picta, Guérin, Voy. Coquille, ii. p. 285, pl. 19, f. 7.
Calogramma picta, Guén. Noct. i. p. 166.

Forewing dull yellowish-ochreous, or pale testaceous-yellow; with some ill-defined black basal streaks on the costa and below the cell; an interrupted transverse antemedial sinuous duplex line, some triangular marks, followed by the reniform mark within the cell, a lengthened lanceolate mark from the antemedial line below the cell, a zigzag discal denticulated duplex line, and an outer discal interrupted series of short black streaks; all these markings being more or less bordered with purple-red, the costal edge also streaked with purple-red: hindwing opalescent ochreous-white. Body yellowish-ochreous; thorax, head, palpi, and legs streaked with purple-red.

Expanse $1\frac{1}{2}$ to $1\frac{3}{4}$ inch.

Genus NEURIA.

Neuria, Guénee, Ann. Soc. Ent. Fr. x. p. 241 (1841); Dupont. Catal. Meth. Eur. Lep. p. 138; Guén. Noct. i. p. 166.

Male: forewing elongate, apex obtusely pointed, exterior margin oblique and slightly convex; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell and joined to third near its base by a short spur; discocellular obliquely concave, bent close to each end, radials from the angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian recurved: hindwing short, exterior margin convex; two subcostals from end of the cell; discocellular bent in the middle, radial from below the middle; two upper medians from end of the cell, lower at one-third before the end; submedian and internal curved. Body stout, thorax laxly clothed; palpi stout, laxly pilose, slightly ascending, third joint thick, cylindrical, short; antennæ minutely serrated and ciliated; legs thick, spurred.

(*N. Saponariæ.*)

NEURIA RETRAHENS.

Hadena retrahens, Walker, Catal. Lep. Het. B. M. xi. p. 757 (1857).

Male: forewing purplish cinereous-brown; with a transverse subbasal and an antemedial outwardly oblique purplish-white black-bordered undulating line, the

latter line being continued along the middle of posterior margin, and then extending obliquely upward across the disc to near the apex, and is then bent inward to the costa above end of the cell; a submarginal row of black spots traversed by a purplish-white lunular line; a marginal denticulated black line; orbicular spot outwardly oblique, black lined; reniform mark with purplish outer bordered line; below the cell, between the median and submedian, is a large conical black spot; edge of posterior margin pale whitish-cinereous: hindwing pale brown, palest at the base; cilia pale cinereous-brown. Thorax, head, palpi, and legs purplish cinereous-brown; abdomen pale brown; legs with pale bands.

Expanse $1\frac{3}{8}$ inch.

NEURIA DISSECTA (Plate 146, Fig. 7).

Heliophobus dissectus, Walker, Catal. Lep. Het. B. M. xxxii. p. 656 (1865), ♀.

Forewing dark purplish-brown, or purplish-black, the veins lined with pale purple; crossed by a slender black, yellow or pale purple-bordered subbasal line, an outwardly oblique antemedial similar line, and a discal inwardly oblique line, each line being bent inward to the costa, the two inner lines from the subcostal vein and the discal line from the upper radial; a submarginal similar coloured sinuous line, and a marginal row of black dentate marks; a pale streak from angle of the discal line to the apex; orbicular and reniform mark defined by a yellowish and pale purple line: hindwing cinereous-brown; cilia edged with pale cinereous. Thorax, head, palpi, and legs dark purplish-brown, and yellow speckled; tarsi with pale bands. Abdomen cinereous-brown, anal segment pale ferruginous.

Expanse $1\frac{3}{4}$ inch.

NEURIA DISCREPANS.

Heliophobus discrepans, Walker, Catal. Lep. Het. B. M. xxxii. p. 655 (1865).

"Male. Cinereous-brown above, testaceous beneath: forewings with black denticulated lines which are interrupted by pale cinereous streaks along the veins; a short broad oblique pale cinereous-brown speckled discal streak; marginal lunules black; costal subapical points testaceous-cinereous; reniform mark pale bordered, very large: hindwings cupreous, cinereous towards the base; fringe testaceous. Wings beneath with a large blackish discal spot and with two exterior brown lines. Palpi obliquely ascending, third joint linear, rounded at the tip, nearly half length of the second; antennæ long, rather broadly pectinated, bare at the tips.

"Expanse 16 to 18 lines."

Described from specimens in Mr. E. L. Layard's Collection.

Genus OXIRA.

Oxira, Walker, Catal. Lep. Het. B. M. xxxii. p. 656 (1865).

"Forewings subquadrate at the tips; exterior border slightly convex and oblique. Body stout, abdomen with rather a large apical tuft; palpi porrect, pubescent, extending somewhat beyond the head, second joint broad, oblique at the tip, third joint subclavate, hardly half the length of second; antennæ moderately pectinated; legs stout, femora broadly fringed, spurs moderately long."

OXIRA OCHRACEA.

Oxira ochracea, Walker, Catal. Lep. Het. B. M. xxxii. p. 657 (1865).

"Male. Ochraceous: forewings minutely black speckled; with four black antemedial points in the disc; two incomplete denticulated, double black lines, one on the inner side of the orbicular, the other on the outer side of the reniform mark; a broader single bent and undulating black line between the marks; a row of black points beyond the second double line; submarginal line blackish, double, nearly straight; orbicular and reniform marks large, incompletely black bordered: hindwings cinereous. Body reddish beneath, abdomen cinereous; first and second joint of palpi black on the outer side; tibiæ and posterior tarsi blackish; tips of the joints of latter cinereous, spurs cinereous, with broad blackish band. Expanse 18 lines."

Genus MAMESTRA.

Mamestra, Ochsenheimer, Schmett. Eur. iv. p. 76 (1816); Samouelle, Ent. U. Comp. p. 251 (1819); Hübner, Verz. bek. Schmett. p. 214 (1818-25).

Male: forewing elongated, apex pointed, exterior margin oblique, posterior angle obtusely pointed; cell extending three-fifths the length of the wing; first subcostal emitted at one-half before end of the cell, and second at one-fourth, trifid; fifth from end of the cell, ascending and touching third near its base; discocellular deeply concave, radials from upper and near lower ends; middle median from close to end of the cell, lower at one-fifth before the end; submedian slightly curved near the base: hindwing slightly produced apically, exterior margin oblique, convex; cell extending to half length of the wing; two subcostals on a footstalk at a short distance beyond end of the cell; discocellular bent inward before the middle, radial from two-thirds above the lower end; middle median from angle immediately before end of the cell, lower at one-third before the end; submedian and internal vein straight. Body moderately stout; palpi porrect, extending slightly beyond the head, very laxly pilose, third joint short, obtuse, imbedded in hairs; femora and tibiæ laxly clothed, middle and hind tibiæ spurred; antennæ serrated, thickly ciliated.

(Type, *M. pisi.*)

MAMESTRA OPPOSITA.

Mamestra opposita, Walker, Catal. Lep. Het. B. M. xxxii. p. 667 (1865).

"Male. Cinereous-black, reddish-cinereous beneath: forewings with three double dentate deep black lines, first line very near the base, second on the inner side of the orbicular mark, connected with the reniform by a short oblique deep black line, third line beyond the reniform, connected with some deep black streaks in which the submarginal whitish line is apparent; marginal points deep black; intermediate marginal points whitish; some deep black costal dots and three exterior whitish costal points; orbicular and reniform marks large, incompletely bordered with deep black and with whitish, the latter containing a triangular ochraceous-whitish spot: hindwings whitish, with a brownish marginal line, fringe with a reddish tinge. Abdomen blackish-cinereous, second, third and fourth segments with blackish crests; tibiæ and tarsi blackish above, tips of tarsal joints cinereous. Expanse 20 lines."

Genus THALPOPHILA.

Thalpophila, Hübner, Verz. bek. Schmett. p. 208 (1818-25); Walker, Catal. Lep. Het. B. M. ix. p. 214.
Cerigo, Stephens, Illust. Brit. Ent. Haust. ii. p. 106 (1829).

Male. Forewing elongated, moderately broad; costa almost straight, apex hardly acute, exterior margin oblique; cell extending beyond half the wing; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, third at one-fifth from base of second and fourth at beyond one-half from base of third, fifth from end of the cell, ascending and joining third for a short distance near its base; discocellular concave, bent near lower end, upper radial emitted from below fifth subcostal at a short distance beyond the cell, lower radial from lower angle of the discocellular; middle median from angle close to end of the cell, lower median at about one-half before the end; submedian recurved: hindwing short, broad; costa arched at the base, exterior margin convex, waved; costal and subcostal joined together near the base, two subcostal branches from beyond end of the cell, discocellular obliquely concave, radial from below the middle; cell extending to half the wing; middle median from angle very close to end of the cell, lower at nearly one-third before the end; submedian and internal slightly curved. Body moderately stout, thorax laxly clothed, abdomen extending beyond hindwings; palpi ascending, laxly pilose, second joint extending to level of the eyes, third joint short, thick, cylindrical; legs thick, fore tibiæ hairy beneath, middle and hind tibiæ hairy above, spurred; antennæ finely bipectinated.

Type, T. texta.

THALPOPHILA DELINEATA (Plate 146, Fig. 5, ♀).

Female: forewing dark purple-brown; with two small black white-bordered spots at the base, placed one above the other, a subbasal slender white line curving outward from the subcostal to posterior margin, a similar line extending from the costa to median vein, enclosing the orbicular and reniform marks, and thence upward to the costa above end of the cell, a white discal line also curving outward from the costa, and a submarginal denticulated line ending in grey speckles at the costa, the lines mostly with black borders; a marginal black lunular line: hindwing pale golden-yellow, with broad diffused cuprescent-brown marginal band. Thorax dark purple-brown; abdomen pale golden-yellow, anal segment cupreous-brown; palpi with black lateral streak; forelegs dark purple-brown, tarsi with pale bands, middle and hind legs pale purplish-white, tarsi speckled with dark purple-brown.

Expanse $1\frac{3}{10}$ inch. In Mr. Mackwood's Collection.

Nearest to *Thal. cuprea*, from the Andaman Isles. Differs on forewing in its much darker colour, more prominent basal spots, which are white bordered, the white transverse lines, the discal line being much less sinuous and zigzag in crossing the wing; the hindwing has the marginal band diffused on its inner border, not sharply defined as in that species.

Genus BERRESA.

Berresa, Walker, Catal. Lep. Het. B. M. xvi. p. 214 (1858).

Wings small. Male: forewing short, broad, elliptic, clothed with short broad imbricated scales; costa arched at the base, exterior margin slightly convex, posterior margin convex towards the base; costal and subcostal veins arched at the base; first subcostal emitted at one-half before end of the cell, second at one-tenth, swollen at the base, trifid, third from close to base of the second, fifth from end of the cell and touching third near its base; cell extending two-thirds the wing, within its middle is a large smooth-rimmed tympanistic depression, which is bordered on the underside along the inner end by a broad fan composed of lengthened broad stout plumose scale; discocellular concave in the middle, bent close to each end, radials from the angles; median distorted, much swollen and curved downward from the middle to about one-third before end of the cell; middle median emitted at one-tenth, and lower at about three-tenths before end of the cell; submedian recurved downward from the base, widely separated from the median: hindwing short, broad, costa arched at the base, exterior margin convex, costal and subcostal joined together for a short distance beyond the base; two subcostals from end of the cell; discocellular oblique, radial from below the middle; two upper medians from end of the cell, lower at one-fifth before the end; submedian and internal vein straight. Cilia

broad; abdominal border fringed with long hairs. Body short; thorax stout, broad, clothed with broad spatular scales; head small; palpi ascending to level of vertex, first and second joints thick and laxly squamose, third joint lanceolate; antennæ slender, setose; legs long, stout, femora slightly pilose beneath, spurs long.

BERRESA NATALIS (Plate 146, Fig. 3, ♂).

Berresa natalis, Walker, Catal. Lep. Het. B. M. xvi. p. 214 (1858).

Forewing dark cinereous-brown; crossed by indistinct basal, subbasal and discal greyish-white and black-speckled denticulated lines, a less prominent submarginal line and marginal black dots; reniform mark indicated by greyish-white dots; male with a large rounded tympanistic depression in middle of the cell: hindwing duller cinereous-brown, crossed by an indistinct pale curved discal line. Body greyish cinereous-brown; palpi speckled with dark brown; legs with blackish speckled bands.

Expanse $\frac{7}{10}$ to $\frac{8}{10}$ in.

Genus ILATTIA.

Ilattia, Walker, Catal. Lep. Het. B. M. xvi. p. 208 (1858).

Wings small: forewing short, triangular; cell extending to half length of the wing; in the male the subcostal and median veins are slightly curved before the first branches, and within the cell is a rounded tympanistic sac, which is smooth, depressed in the middle on the upperside, and on the underside is bordered along its inner end by a fan-like lappet of broad plumose scales; first subcostal branch emitted at one-half before end of the cell, second at one-sixth, fifth from end of the cell and touching the third near its base; discocellular recurved, radials from near upper and lower ends; middle median at one-eighth and lower median at one-half before end of the cell; submedian slightly curved: hindwing short, very broad; cell less than half length of the wing; two subcostals from end of the cell; discocellular oblique, concave, radial from below the middle; two upper medians from end of the cell, lower at one-fourth before the end. Body moderately slender, abdomen rather long, thorax clothed with broad spatular scales; palpi projecting to level of vertex, first and second joints smoothly squamose, third lanceolate; legs long; antennæ setose.

Differs from Berresa in the triangular form of forewing, the different position of the tympanistic sac, as well as in the relative positions of the veins in the male, the more slender and longer body, and less robust palpi.

ILATTIA CEPHUSALIS (Plate 146, Fig. 4, ♂, 4*a*, ♀).

Ilattia cephusalis, Walker, Catal. Lep. Het. B. M. xvi. p. 208 (1858).
Miana inornata, Walker, *id.* xxxii. p. 677 (1865).
Perigea leucospila, Walker, *id.* xxxii. p. 683, ♀.

Forewing vinous-brown, grey speckled; crossed by indistinct basal, subbasal, discal, and submarginal black denticulated lines, which are bordered with greyish-white speckles; a marginal row of minute white-pointed black dots; reniform more or less distinct, with the lower part grey speckled in the male and pale ochreous in the female; male with a rounded tympanistic depression near base of the cell: hindwing dark cinereous-brown; cilia pale cinereous-brown. Body vinous-brown; abdomen paler; thorax grey speckled; palpi and legs pale brownish-ochreous.

Expanse $\frac{9}{10}$ to 1 inch.

Genus APAMEA.

Apamea, Ochsenheimer, Schmett. Eur. iv. p. 75 (1816); Samouelle, Ent. U. Comp. p. 251 (1819).

Male: forewing elongated, costa almost straight, apex pointed, exterior margin oblique, convex, scalloped; cell extending to three-fifths the wing, narrow; first subcostal emitted at more than one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell and touching third near its base; discocellular deeply concave, radials from upper and near lower end; middle median from angle near end of the cell, lower at one-third before the end; submedian recurved: hindwing short, broad, apex convex, exterior margin oblique, slightly scalloped; cell extending to half the wing; two subcostals from end of the cell; discocellular deeply bent in the middle, radial from near the lower end; two upper medians from end of the cell, lower at about one-fourth before the end; submedian and internal vein straight. Body moderately stout; thorax stout, woolly, abdomen dorsally carinated and slightly crested; palpi porrect, second joint extending beyond the front, laxly pilose, third joint short, thick, clavate, squamose; antennæ ciliated; legs stout, femora and tibiæ thickly clothed, middle and hind tibiæ spurred. (*A. basilinea.*)

APAMEA PANNOSA (Plate 147, Fig. 1, ♀).

Apamea pannosa, Moore, Proc. Zool. Soc. 1881, p. 345.

Forewing dark ferruginous-brown in male, blackish-brown in female; crossed by a black-bordered pale ochreous zigzag sinuous subbasal line, an antemedial and a discal line, and a lunular submarginal line, the last ending in a large pale ochreous patch at the apex; a marginal row of black dentate spots; interciliary line also pale ochreous; a pale ochreous patch below the base of the cell and a diffused patch at the posterior angle; orbicular and reniform marks black lined and with pale ochreous inner border, the centre streaked with ferruginous-brown: hindwing, and abdomen,

cinereous-brown; cilia pale cinereous. Thorax, head, palpi, and legs above ferruginous-brown; tarsi with pale ochreous bands.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{7}{10}$ inch.

APAMEA CONSANGUIS.

Hadena consanguis, Guénee, Noct. ii. p. 97 (1852).
Apamea undicilia, Walker, Catal. Lep. Het. B. M. ix. p. 251 (1856).

Forewing pale brownish-ochreous, speckled with brown; some blackish streaks along the costa; a dark brown subbasal, an antemedial, and a discal zigzag duplex line, the medial area being more or less dark brown; a small rounded black-lined mark below the cell; a marginal pale-bordered sinuous brown band, and a slender lunular interciliary line; orbicular and reniform mark black lined: hindwing pale cinereous, with broad brownish outer border. Body ochreous-brown; thorax streaked with ferruginous-brown; tarsi with black bands.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{2}{8}$ inch.

Genus PERIGEA.

Perigea, Guénee, Noct. i. p. 225 (1852); Walker, Catal. Lep. Het. B. M. x. p. 270.

Forewing elongated; cell extending more than half length of the wing; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, the third from close to its base immediately above end of the cell, and fourth at one-third beyond base of the third, fifth from end of the cell and joined to third by a short spur close to its base; discocellular obliquely concave, radials from upper end and close to lower end; middle median from angle close to end of the cell, lower at one-third before the end; submedian recurved: hindwing short, exterior margin convex, slightly scalloped; cell extending to nearly one-half the wing; costal and subcostal joined together near their base; two subcostals from end of the cell; discocellular oblique, recurved, radial from below the middle; middle median from immediately before end of the cell, lower at one-fourth; submedian and internal vein straight. Body rather stout; palpi ascending, second joint extending to level of the eyes, first and second joints laxly squamose, third joint cylindric; antennæ setose; legs rather thick, femora pilose beneath, spurs long.

PERIGEA CENTRALIS (Plate 147, Fig. 2, ♂, 2*a*, larva).

Perigea centralis, Walker, Catal. Lep. Het. B. M. xi. p. 734 (1857), ♀.
Celæna serva, Walker, *id.* xv. p. 1689 (1858), ♂.
Perigea canorufa, Walker, *id.* xxxii. p. 683 (1865), ♂.
Perigea illecta, Walker, *id.* p. 684, ♀.
Hadena spargens, Walker, *id.* xxxiii. p. 739 (1865), ♀.
Hadena taprobane, Felder *et* Rogenh. Novara Voy. Lep. iv. pl. 110, fig. 3 (1874), ♀.

Forewing dark cinereous-brown or vinaceous-brown; numerously speckled with

greyish-ochreous or whitish scales, which are most distinct along the veins in some specimens; crossed by an indistinct basal, subbasal, and discal denticulated black lines, which are more or less distinctly bordered with greyish-ochreous or whitish scales, the discal line with lengthened speckled points; a similar submarginal broader line, and a marginal row of black points; orbicular and reniform marks defined by blackish bordered greyish-ochreous dots, the orbicular indistinct: hindwing pale brown; cinereous at the base; cilia whitish-cinereous. Body dark brown; palpi ochreous-white, black speckled; legs whitish with black bands.

Expanse $1\frac{1}{8}$ to $1\frac{3}{8}$ inch.

Larva smooth, pale green, anal segment conical; with a dorsal and lateral series of purple-brown blotches dotted with white, and a sublateral row of white dots. Pupa greenish, with reddish segmental bands.

"Feeds on Acanthads." (*Dr. Thwaites.*)

Family CARADRINIDÆ.

Imago of rather small size: forewings roof-shaped in repose. Larva short and thick, with short stiff hairs; feeds on low plants. Pupa in a subterranean cocoon. (*Stainton.*)

Genus AMYNA.

Amyna, Guénee, Noct. i. p. 233 (1852); Walker, Catal. Lep. Het. B. M. x. p. 299.

Forewing broad, triangular, acuminated at the apex, cell narrow, extending to nearly two-thirds the wing; first subcostal emitted at one-half and second at one-eighth before end of the cell, fifth from end of the cell and touching third midway between its base and the fourth at a short distance beyond the cell; discocellular concave in the middle, radials from upper end and near lower end; middle median from close to end of the cell, lower at about two-fifths before the end; submedian slightly curved: hindwing large, broad; costal and subcostal joined together at their base; cell broad, not extending to half the wing; two subcostals from end of the cell; discocellular recurved, radial from below the middle; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein straight. Body slender, abdomen long and attenuated in male; palpi porrect, laterally broad, squamose, second joint rectangular, third short, lanceolate; antennæ long, slender, setose; legs long, femora fringed beneath, spurs long.

AMYNA SELENAMPHA (Plate 147, Fig. 3, 3a, ♂ ♀).

Amyna selenampha, Guénee, Noct. i. p. 406 (1852); Walker, Catal. Lep. Het. B. M. x. p. 300; xv. p. 1696.

Alamis spoliata, Walker, *id.* xiii. p. 1050 (1857), ♀.

Hadena latipennis, Walker, *id.* xxxiii. p. 738 (1865), ♀.

Amyna absens, Guén. MS. Horsf. Coll. ♀.

Male: forewing dark cinereous-brown; crossed by indistinct basal, subbasal, and discal zigzag grey-bordered black denticulated lines, a less distinct submarginal line and marginal dots; reniform mark indistinct, either formed of grey-bordered dots, or with the lower part entirely whitish: hindwing duller cinereous-brown. Body dark cinereous-brown; head in front, palpi, and legs whitish-ochreous and black speckled; front legs with black bands. Cilia edged with cinereous.

Female darker coloured, vinaceous-brown, the transverse lines more distinct and with more or less prominently broader speckled borders.

Expanse $1\frac{2}{8}$ to $1\frac{3}{8}$ inch.

Genus RADINACRA.

Radinacra, Butler, Annals of Natural History, 1878, p. 161.

"Closely allied to Caradrina, from which it may be distinguished by the great length of the apical joint of the palpi, and the great development of the anal tuft and appendices of the male."

(Type, *R. palpalis.*)

RADINACRA PLACIDA (Plate 147, Fig. 4, ♂).

Male and female: forewing ochreous-brown; crossed by an indistinct subbasal, an antemedial, and a medial black line, a discal and a submarginal blackish speckled line, the discal line denticulated, the middle line broadest; a small black orbicular spot, and indistinct blackish reniform mark: hindwing whitish, veins pale brown. Body ochreous-brown; palpi with a broad black band; legs pale ochreous-brown with blackish tarsal bands.

Expanse 1 inch.

Described from specimens obtained from the late Dr. Thwaites' Collection.

RADINACRA RENALIS (Plate 147, Fig. 4a).

Female: forewing dark cinereous-brown; crossed by a subbasal, an antemedial and a medial waved black line, the latter line the broadest, a discal denticulated black line with white tipt points, a less distinct submarginal line, and a marginal row of white dots; each line ends on the costa in a pale ochreous spot; within the cell between the two inner lines is a pure white-speckled spot; reniform mark composed of a pure white or ochreous-white central spot and black border with two or three

white lower and upper dots: hindwing pale cinereous-brown, the veins darker brown; cilia edged with cinereous-white. Body dark brown; palpi and tarsi with black bands.

Expanse 1 inch.

From the late Dr. Thwaites' Collection.

RADINACRA THORACICA (Plate 148, Fig. 4).

Male and female: forewing pale ochreous-brown, with a very indistinct transverse basal, antemedial, and a medial blackish-scaled sinuous line, a discal slightly recurved pale ochreous line, and a less distinct sinuous pale submarginal line; the discal line with a few blackish scales along its inner border; and a more conspicuous patch of blackish scales before the middle of the sinuous submarginal line; along the extreme outer margin is a row of minute black dots; cilia with a pale inner line: hindwing whitish-cinereous, semitransparent, veins and marginal line ochreous-brown. Thorax in male with a broad brownish-black band in front; abdomen brown above; palpi at the side, and bands on forelegs above dark brown.

Expanse $1\frac{2}{10}$ inch.

Described from specimens obtained from the Collection of the late Dr. Thwaites.

Family NOCTUIDÆ.

Imago of moderate size; forewings smooth or shining, crossing one another a little in repose and forming a roof almost flat; body stout, abdomen flat, not crested. Larva thick, smooth, shining or velvety, generally of dull colours; lives on low plants, concealing itself either under leaves on the ground or even in subterranean galleries. Pupa subterranean, enclosed in an earthen cocoon. (*Stainton.*)

Genus AGROTIS.

Agrotis, Hübner, Tentamen, p. 1 (1806); Ochsenheimer, Sehmett. Eur. iv. p. 66 (1816); Guénee; Walker.

Male: forewing elongate, apex obtuse, exterior margin oblique, slightly convex; cell extending to two-thirds the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell, ascending and joined to third by a very short spur near the base; discocellular concave, upper radial from end of the cell in a line with subcostal, lower radial from near the lower end; middle median from angle close to end of the cell, lower median at one-fourth before the end; submedian recurved: hindwing short, broad, apex convex, exterior margin somewhat angular in the middle; costal and subcostal joined at their base; two subcostals from

end of the cell; discocellular bent near the middle, radial from below the middle; two upper medians from end of the cell, lower at about one-fourth; submedian and internal straight. Body stout, thorax compactly clothed, not crested; palpi porrect, first and second joints of equal length, thickly clothed with long hairs, third joint subovate, squamose; antennæ rather broadly bipectinated at the base and thence setose to the tip in male; legs long, femora pilose beneath, tibiæ compactly clothed, fore tibiæ above with two lateral rows of long stout spines, middle and hind tibiæ with similarly disposed but shorter spines in addition to the spurs beneath, tarsi thickly spined. (*Type*, A. segetum.)

AGROTIS ARISTIFERA (Plate 147, Fig. 5, ♂).

Agrotis aristifera, Guénee, Noct. i. p. 266 (1852); Walker, Catal. Lep. Het. B. M. x. p. 344.

Male: forewing pale lilacine brownish-ochreous; with transverse basal and subbasal indistinct blackish duplex lines, a black-lined sagittate orbicular mark and a large reniform mark, the intervening space black streaked; a lengthened black lanceolate mark below the cell; a transverse submarginal series of blackish pale bordered zigzag streaks traversed by a pale sinuous line; a marginal row of black dots: hindwing white. Female: forewing darker; prominently marked as in male: hindwing pale brownish along anterior and exterior borders, the veins brown. Body brownish-ochreous; abdomen whitish-cinereous; palpi and legs with black bands.

Expanse $1\frac{1}{10}$ to $1\frac{3}{10}$ inch.

AGROTIS PUNCTIPES.

Agrotis punctipes, Walker, Catal. Lep. Het. B. M. xxxii. p. 695 (1865).

"Male and female. Whitish-cinereous, with a slight testaceous tinge: forewings minutely speckled with black; a brown straight discal line extending from the base to beyond the middle, where there is a small brown mark; lines brownish, undulating, very slender, almost obsolete; marginal points black; two blackish dots on the exterior part of the above line; the interior one larger than the other and partly reddish; two black costal dots, of which the exterior one is larger beneath; orbicular and reniform marks obsolete: hindwings whitish, semi-hyaline, brownish along the exterior border, which has black points beneath; fringe whitish. Palpi short, second joint marked with brown on the outer side, third conical, extremely minute, not more than one-sixth of the length of the second; spurs at the base, and knees with black points.

"Expanse 14 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

AGROTIS CONGRUA.

Agrotis congrua, Walker, Catal. Lep. Het. B. M. xxxii. p. 695 (1865).

"Male. Fawn colour, pale cinereous beneath: forewings somewhat darker along the exterior border; basal half line, interior line and exterior line black, denticulated, the last one somewhat bent; submarginal line pale, denticulated; marginal lunules black; orbicular and reniform marks large, black bordered, the latter slightly excavated, with a greyish-brown disc: hindwings white, semi-hyaline; marginal line brown, pale testaceous towards the interior angle. Palpi very pilose; antennæ pectinated for nearly two-thirds the length from the base; thorax with an interrupted black band in front; abdomen, and underside testaceous.

"Expanse 16 lines."

Described by Mr. Walker from specimen in Mr. E. L. Layard's Collection.

AGROTIS CONSPURCATA (Plate 147, Fig. 7, 7*a*, ♂ ♀).

Agrotis conspurcata, Walker, Catal. Lep. Het. B. M. xxxii. p. 696 (1865), ♀.

Male: forewing dark cinereous-brown, mottled with cinereous-black; a basal, and a subbasal transverse duplex sinuous black line, and a short black-lined lanceolate mark below the cell; a black-lined round orbicular mark and large reniform mark; a transverse discal denticulated indistinct line, and a pale sinuous submarginal line: hindwing white, costal border suffused with pale brown, veins also brown. Female: forewing darker than in male, markings less distinct: hindwing with the costal and exterior border suffused with pale brown. Body dark brown; abdomen pale cinereous-brown; legs with black bands.

Expanse, ♂ $1\frac{5}{10}$, ♀ $1\frac{6}{10}$ inch.

AGROTIS SUFFUSA (Plate 147, Fig. 6).

Phalæna Noctua suffusa, Gmel. Syst. Nat. i. 5, p. 2541 (1788).

Agrotis suffusa, Treit. Schmett. Eur. V. i. p. 152; Guén. Noct. i. p. 268.

Forewings cinereous-brown, with basal and subbasal transverse black duplex lines, a discal denticulated line with a contiguous outer row of black dots, and a submarginal zigzag line; a short lanceolate mark below the cell; orbicular mark pyriform, orbicular and reniform mark with black centre; an exterior black streak from the reniform mark: hindwing cinereous-white, the borders pale cinereous-brown; veins brown. Body cinereous-brown; palpi and legs with black bands.

Expanse $1\frac{6}{8}$ to 2 inches.

Genus TIRACOLA.

Tiracola, Moore, Proc. Zool. Soc. 1881, p. 351; Desc. Lep. Coll. Atk. p. 117 (1882).

Forewing long, narrow, costa slightly arched towards the end, apex acute;

exterior margin oblique, convex and sinuous; cell long; first subcostal branch emitted at half length of the cell, second at three-fourths its length, trifurcate, third emitted at one-third beyond base of the second, and fourth at about one-half from base of third, fifth from end of the cell and touching the third near its base; discocellular deeply concave, upper radial from angle close to upper end of the cell, lower radial from angle near lower end of the cell; upper median from angle above and middle median from end of the cell, third at one-third before its end; submedian concave near its base: hindwing triangular, apex convex; exterior margin oblique, recurved, slightly sinuous; cell short; two subcostal branches from end of the cell; discocellular very slender, angled inward in the middle, a slender radial from the angle; two upper median branches from lower end of the cell, third branch at half before its end. Body stout, abdomen long; palpi short, ascending, compactly clothed, second joint thick, third joint short; legs compactly pilose above; antennæ setose.

TIRACOLA PLAGIATA (Plate 148, Fig. 1, ♂, 1*a*, larva).

Agrotis plagiata, Walker, Catal. Lep. Het. B. M. xi. p. 740 (1857), ♂.
Tiracola plagiata, Moore, P. Z. S. 1881, p. 351.
Agrotis plagifera, Walker, Catal. Lep. Het. B. M. xi. p. 741 (1857), ♀.

Forewing brownish-testaceous, speckled with brown, crossed by a more or less indistinct brownish basal and a subbasal angular line, a suffused medial line, a denticulated line with darker points, and a pale waved submarginal line; orbicular spot small, pale, reniform mark large, brown, enclosed in a broad triangular brown costal patch; a brownish zigzag fascia on exterior border: hindwing pale cinereous-brown, paler along the costa; cilia cinereous-white. Body brownish-testaceous; palpi and tarsi with brown bands.

Expanse 1¾ to 2 inches.

Larva dull violet-brown; with a few fine dorsal hairs, a few scattered grey dots, and a sublateral pale olivaceous band from fourth segment; head small; head and legs violet-grey; twelfth segment conical. Pupa dark red.

"Feeds on Emilia." (*Dr. Thwaites.*)

Genus GRAPHIPHORA.

Graphiphora, Ochsenheimer, Schmett. Eur. iv. p. 68 (1816); Samouelle, Ent. U. Comp. p. 251 (1819).

Male: forewing elongate, apex pointed, exterior margin slightly oblique, and convex; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end of the cell and touching third close to its base; discocellular deeply concave, bent close to each end, radials from the angles; middle median from angle close to end of the cell, lower at one-fourth; submedian recurved:

hindwing short; exterior margin oblique, waved; two subcostals from a short distance beyond end of the cell; discocellular bent in the middle, radial from below the middle; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal vein nearly straight. Body stout, laxly clothed; palpi pilose beneath, third joint cylindrical, half length of second; antennæ finely ciliated; legs stout, spurred.

(*G. Augur.*)

GRAPHIPHORA FRONTALIS (PLATE 148, FIG. 3).

Forewing deep purplish-brown; with a black dot at base of the wing, one near base of cell, and two below the cell; an indistinct blackish denticulated discal duplex line with lengthened grey-spotted points, followed by a nearly straight submarginal pale whitish slender line; orbicular mark defined by a black dot, reniform mark with indistinct pale whitish outer line and blackish lower half; all the markings indistinctly bordered by purplish chalybeate-grey; cilia pale reddish-brown: hindwing and abdomen cinereous-brown. Thorax purplish-brown; head and palpi cinereous-white; side of palpi, and legs above with dark purplish-brown bands.

Expanse $1\frac{1}{4}$ inch.

Family ORTHOSIIDÆ.

Imago of moderate size: forewings more or less pointed at the apex; abdomen often depressed, not crested. Larva cylindric, velvety; feeds on trees or low shrubs, and concealed during the day. Pupa subterranean, enclosed in a cocoon of earth or silk. (*Stainton.*)

Genus ARAMUNA.

Forewing short, broad, triangular; costa straight, apex somewhat acute, exterior margin long, oblique, posterior margin slightly convex; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, the third thrown off at one-sixth from base of second and the fourth at two-thirds from base of the third, fifth from end of the cell and very slightly touching the third near its base; cell broad, extending to half the wing; discocellular almost erect, slightly bent near lower end, radials from upper end and lower angle; middle median at one-eighth and lower at nearly one-third before end of the cell; submedian straight, disposed at equal distance between median and posterior margin: hindwing very short, quadrate, with a large oval glandular patch of dense woolly scales occupying the middle area between costal and median veins, the apex and exterior border also laxly clothed with hairy scales; the costal, subcostal, and median vein distorted, the costal vein curving along upper end of the patch, two subcostal branches from end of the cell; discocellular oblique,

the radial and three medians being near together at lower end of the cell; submedian and internal vein curved. Body moderate, abdomen tufted at apex; palpi ascending, broad, compressed, laxly squamose, apical joint minute, conical; antennæ finely pectinated; legs squamose, middle and hind tibiæ spurred.

ARAMUNA MARGINATA (PLATE 149, FIG. 6, ♂).

Male: forewing brownish-ochreous, with a dark brown irregular bordered marginal band, a small indistinct brown-speckled spot at upper end of the cell, and a discal row of minute brown dots: hindwing pale yellowish-ochreous, with a large oval brownish-ochreous glandular patch of scales disposed between the costal and median veins, and woolly scales on the apical border. Body above brownish-ochreous, anal tuft dark brown; palpi and legs dark brown.

Expanse 1¼ inch.

Family HADENIDÆ.

Imago with moderately broad wings; abdomen more or less crested; in repose the wings form a very inclined roof. Larva smooth, not shining, the spots not raised, sometimes with the twelfth segment humped; feeds exposed or simply sheltered on trees or shrubs. Pupa enclosed in an oval cocoon and buried more or less deeply. (*Stainton.*)

Genus TRACHEA.

Trachea, Ochsenheimer, Schmett. Eur. iv. p. 75 (1816); Hübner, Verz. bek. Schmett. p. 219; Samouelle, Ent. U. Comp. p. 251.

Male: forewing elongate, exterior margin slightly oblique and scalloped; cell extending two-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, third at one-third from base of second, fourth at one-third from base of third, fifth from end of the cell and touching third halfway between its base and fourth; discocellular bent inward acutely in the middle and outward near lower end, radials from upper end and lower angle; middle median from angle close to end of the cell, lower at nearly one-third before the end; submedian recurved: hindwing short, exterior margin oblique, waved, scalloped; cell broad; two subcostals from end of the cell; discocellular concave before the middle, radial from below the middle; the middle median from angle immediately before end of the cell, lower at one-third before the end; submedian and internal vein curved. Body stout, laxly clothed; thorax crested, abdomen with dorsal crests and lateral tufts; palpi ascending, short, first and second joints broad, laxly clothed, third joint short, thick; antennæ finely ciliated; legs stout, tibiæ thickly clothed, middle and hind tibiæ spurred.

(Type, *T. atriplicis.*)

TRACHEA AURIPLENA (Plate 148, Fig. 2).

Eurois auriplena, Walker, Catal. Lep. Het. B. M. xi. p. 557 (1857).

Forewing brown; crossed by a subbasal and an antemedial zigzag green-bordered black line, a discal denticulated black line with purplish-grey outer border, an irregular zigzag submarginal grey-bordered black line, and a marginal row of green-bordered black lunules; orbicular mark round, reniform mark large, both with green inner border; a more or less purplish-white streak extending from between the orbicular and reniform marks obliquely below the cell; the area between the inner lines, and also between the discal lines suffused with purplish-grey: hindwing brownish-white, with a broad dark brown marginal band; cilia white, with inner brown line. Thorax, head, palpi, and legs brown, green streaked; tarsi with greenish bands; abdomen cinereous-brown.

Expanse $1\frac{3}{4}$ inch.

Genus EUROIS.

Eurois, Hübner, Verz. bek. Schmett. p. 218 (1818-25).

Forewing long; exterior margin oblique; cell long, narrow, extending three-fifths the length; first subcostal emitted beyond one-half before end of the cell, second at one-fourth, trifid, third at one-third from base of second, fourth at one-half from base of third, fifth from end of the cell and touching the third near its base; discocellular bent acutely inward in the middle and slightly outward near lower end, radials from upper end and lower angle; middle median from close to end of the cell, lower at more than one-third before the end; submedian recurved: hindwing broad, exterior margin oblique, waved; two subcostals from a short distance beyond end of the cell; discocellular bent in the middle, radial from below the middle; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein straight. Body stout; palpi laxly clothed beneath, second joint broad, third joint short, thick, conical; antennæ finely ciliated; legs stout, pilose, middle and hind tibiæ spurred. (*E. occulta.*)

EUROIS INCLUSA.

Eurois inclusa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 725 (1865).

"Female. Greenish-brown: forewings speckled with black; cinereous about the middle and about the exterior border; costa hardly convex; tips slightly rounded; exterior border very oblique; a short black basal line; interior and exterior lines black, the first nearly straight, the second denticulated and much bent outward; marginal line brown, interrupted by each vein; orbicular mark forming a blackish dot; reniform mark almost obsolete: hindwings cinereous; marginal line brown. Abdomen and underside cinereous, the former speckled with black.

"Expanse 18 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

Genus ASTRAPETIS.

Astrapetis, Hübner, Verz. bek. Schmett. p. 219 (1818-25).
Hadena (part), Ochsenheimer, Sch. Eur. iv. p. 71 (1816); Treitschke; Guénee; Walker.
Dichonia (part), Hübner, Verz. bek. Sch. p. 217.

Forewing moderately elongate, rather broad, exterior margin slightly scalloped; cell extending three-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-eighth, trifid, fifth from end of the cell, curved upwards and touching third halfway between its base and the fourth; discocellular outwardly oblique, concave, bent near lower end, radial from upper end and lower angle; middle median from angle close to end of the cell, lower at one-fourth before the end; submedian waved: hindwing short, exterior margin waved, slightly scalloped; cell extending half the length; two subcostals on a footstalk at a short distance beyond end of the cell; discocellular bent acutely before the middle, radial from near lower end; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein straight. Body robust, thorax stout; thorax and abdomen crested; palpi porrect, short, thick, pilose beneath, third joint small, obtuse; antennæ minutely pectinated; legs stout, pilose, spurs stout. (*A. Genistæ.*)

ASTRAPETIS INDISTANS (Plate 148, Fig. 5).

Hadena indistans, Guénee, Noct. ii. p. 87 (1852).
Hadena confundens, Walker, Catal. Lep. Het. B. M. xi. p. 757 (1857).
Hadena inextricans, Walker, *id.* xv. p. 1729 (1858).

Ferruginous-brown: forewing with transverse subbasal and antemedial zigzag black duplex lines, a discal denticulated duplex line, and a submarginal row of lengthened black dentate streaks traversed by a pale macular line; a broad quadrate black mark below the cell; orbicular and reniform marks indistinctly black lined, the reniform mark sometimes with white speckles on its outer edge, intervening space between the two marks blackish; some pale-bordered blackish streaks on costal border: hindwing paler brown, cinereous towards the base; cilia pale ferruginous. Legs with black bands.

Expanse $1\frac{3}{8}$ to $1\frac{1}{3}$ inch.

ASTRAPETIS RUPTISTRIGA.

Hadena ruptistriga, Walker, Catal. Lep. Het. B. M. xxxiii. p. 739 (1865).

"Male. Brownish-cinereous beneath: forewing black speckled, with a slight purplish-chalybeous tinge; five or six indistinct incomplete dentate brown lines; a more exterior distinct and complete brown line which is partly double; marginal lunules brown; a broad black streak interrupted by the orbicular mark and extending to the reniform; orbicular and reniform mark large, oblique, with cinereous borders,

the latter slightly excavated on the outer side: hindwings cinereous. Palpi erect, pubescent, rising much higher than the vertex, third joint lanceolate, more than half length of the second; antennæ setose; abdomen cinereous, tarsi blackish, their joints with cinereous tips.

"Expanse 16 lines."

Family XYLINIDÆ.

Imago with oblong wings, folded in repose, forming a flattened roof and giving the insect an elongated appearance; collar often crested. Larva smooth, generally of brilliant colours, living exposed on low plants or trees. Pupa often furnished with projecting ventral appendages; enclosed in a cocoon of variable consistence, either subterranean or above ground. (*Stainton.*)

Genus LITHOPHANE.

Lithophane, Hübner, Verz. bek. Schmett. p. 242 (1818-25).
Grapholitha, Hübner, *id.* p. 243.
Xylina (part), Ochsenheimer; Stephens; Guénee; Walker.

Forewing elongated, narrow, apex pointed, exterior margin oblique, slightly scalloped hindward; cell long, narrow, extending three-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell, slightly touching third near its base; discocellular concave, radials from upper and near lower ends; middle median from close to end of the cell, lower at one-third before the end; submedian slightly curved: hindwing narrow, apex slightly produced, exterior margin waved and slightly scalloped; two subcostals from immediately beyond end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body moderate, thorax and abdomen crested; palpi porrect, laxly pilose beneath, third joint laxly squamose; antennæ minutely pectinated; legs pilose, spurs rather short. (*X. petrificata.*)

LITHOPHANE DEFLEXA.

Xylina deflexa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 751 (1865).

"Female. Pale fawn colour: forewings ochraceous on more or less of the third half and along the exterior border, except at the tips; lines blackish, undulating, denticulated, accompanied by some whitish points, diffuse, indistinct, sometimes almost obsolete; submarginal line forming an obtuse angle outward in front; marginal points black; orbicular and reniform marks almost obsolete, the latter having behind it a pale testaceous spot, which on its outer side joins a black spot of equal size; a pale cinereous line along the interior border and a blackish tinge by the

interior angle: hindwings brownish towards the exterior border; fringe testaceous. Abdomen, hindwings and underside cinereous; palpi vertical, third joint elongate-conical, less than half length of second.

"Expanse 12 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

LITHOPHANE INCHOANS.

Xylina inchoans, Walker, Catal. Lep. Het. B. M. xxxiii. p. 751 (1865).

"Female. Whitish-cinereous: forewings slightly and minutely speckled with black; the interior and exterior lines blackish, denticulated, the former incomplete, the latter bent outward in the middle; submarginal line brown, denticulated, very diffuse; marginal dots brown; orbicular and reniform marks almost obsolete; a large white discal spot; underside with a tuft of long blackish hairs, which are pale towards the base: hindwings whitish, semi-hyaline, brownish towards the exterior border. Body slightly shaded with pale brown; palpi almost vertical, third joint linear, conical at the tip, almost as long as the second; antennæ stout, with minute tufts of hairs; abdomen extending a little beyond hindwings; tibiæ and tarsi brown, the joints of latter with white tips. Expanse 13 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

Family HÆMEROSIIDÆ.

Imago with rather short and broad wings; deeply ciliated. Larva cylindrical; head small; feeds on low plants.

Genus ARIOLA.

Ariola, Walker, Catal. Lep. Het. B. M. xii. p. 768 (1857).

Wings small: forewing short, narrow, elliptic; costa much arched at the base, exterior margin convex, slightly oblique, posterior margin convex towards the base; cell disposed along middle of the wing, extending two-thirds its length; first subcostal emitted at one-half before end of the cell, second at one-fourth, bifid, fourth from end of the cell, bifid, the fourth anastomosed to the third for some distance from near its base at a short distance above the fifth; discocellular outwardly oblique, slightly bent near lower end, radials from upper end and lower angle; middle median from angle close below end of the cell, lower at one-fourth before the end; submedian straight: hindwing short, apex and exterior margin very convex; cell broad, extending to half length of the wing, lower end very acute; two subcostals from end of the cell: discocellular oblique, concave, lower end prolonged, radial from the extreme lower end; two upper medians on a footstalk beyond end of the cell,

lower at about one-third; submedian and internal vein straight. Body small, thorax stout, abdomen extending beyond hindwings; palpi ascending, laxly clothed; first joint very narrow, second joint broadly dilated at the sides towards the tip and extending some distance in front of the head, third joint very minute, conical; antennæ stout, simple; legs squamose, fore tibiæ thick, laxly clothed.

ARIOLA CÆLISIGNA.

Ariola cælisigna, Walker, Catal. Lep. Het. B. M. xii. p. 769 (1857).
Ariola Ransonnetii, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 108, fig. 1 (1874).

Forewing dark sap-green, with a longitudinal narrow pearly-white fascia curving downward from base of the costa to the apex, the upper border of the fascia sharply defined, and the lower area of the wing of a paler green; a slight blackish streak along base of posterior margin and with some pale purple speckles at its extreme end; an outer marginal narrow pale purple band, including the cilia, the inner border of the band being sinuous, and traversed by an inner black sinuous band and slender marginal line: hindwing and abdomen dark cinereous-brown. Thorax, head, and palpi dark green; legs whitish; forelegs blackish above, with white tarsal bands, middle tarsi with blackish bands.

Expanse $\frac{3}{4}$ inch.

Family ACONTIIDÆ.

Imago with rather shining thick forewings, in repose covering the hindwings and forming a very sloping roof. Larva slender, a little swollen posteriorly, with twelve legs; feeds exposed. Pupa subterranean. (*Stainton.*)

Genus ACONTIA.

Acontia, Ochsenheimer, Schmett. Eur. iv. p. 91 (1816); Hübner, Verz. bek. Schmett. p. 257 (1818-25).
Heliothera, Sodoffsky, Bull. Soc. Imp. Mosc. pt. vi. p. 16 (1837).
Xanthodes, Guénee, Noct. ii. p. 209 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 778.

Male: forewing elongate, triangular; straight in front, apex almost pointed, exterior margin slightly oblique; cell long, narrow, extending three-fifths the length; first subcostal emitted at one-third before end of the cell, second close to end of the cell, bifid at a short distance from the base, fourth from end of the cell and also bifid at a short distance from the base; discocellular outwardly oblique, slightly concave, bent close to each end, radials from the angles; middle median from close before end of the cell, lower at about one-third; submedian curved: hindwing short, broad, apex and exterior margin convex; two subcostals from end of the cell; discocellular outwardly oblique, radial from below the middle; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal vein straight.

Body moderately stout, abdomen keeled above; head pointed in front; palpi ascending to vertex, narrow, compactly squamose, second joint long, third joint of the same breadth and half the length of the second, pointed at the tip; antennæ minutely ciliated; legs stout, tibiæ densely fringed, middle and hind tibiæ with long spurs.

(*Type*, A. Malvæ.)

ACONTIA FLAVA (Plate 149, Fig. 2, 2*a*, larva).

Noctua flava, Fabricius, Ent. Syst. iii. 2, p. 51 (1793).

Xanthodes transversa, Guénee, Noct. ii. p. 211, pl. 10, fig. 5 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 778.

Yellow: forewing with a transverse basal, an antemedial, a discal, and a submarginal ferruginous-brown line, the three outer lines acutely angulated externally, the inner line on the median vein, the discal line on the upper radial, where the angle is acutely prolonged and extends to the submarginal line; along the exterior margin is a broad ferruginous-brown band with irregular inner border; cilia ferruginous-brown: hindwing paler yellow in male, ochreous-yellow in female; cilia yellowish-cinereous. Body yellow, thorax with ferruginous-brown streaks; sides of head and palpi ferruginous-brown; legs above ferruginous-brown.

Expanse $1\frac{1}{4}$ to $1\frac{1}{2}$ inch.

Larva with twelve legs; pale green, with a few very fine hairs; a subdorsal, lateral, and a sublateral row of white spots, the subdorsal row with an intervening larger yellow spot on each segment. Pupa pale purplish-red.

ACONTIA INTERSEPTA (Plate 149, Fig. 3).

Xanthodes intersepta, Guénee, Noct. ii. p. 212 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 778 (1857).

Yellow: forewing deep yellow, with a longitudinal ferruginous-brown fascia extending from below the cell and widening to the exterior margin below the apex, the fascia joining a distinct slender ferruginous-brown marginal line; a few black speckles at the apex; four or five paler ferruginous-brown spots along the costal border, the two spots nearest the apex slightly oblique, two similar spots also on the submedian vein; cilia brownish-cinereous: hindwing ochreous-yellow; cilia pale cinereous. Thorax pale yellow; abdomen ochreous-yellow; head above and palpi beneath white, head and palpi with lateral ochreous-brown band; legs brownish-ochreous above, white beneath.

Expanse $1\frac{1}{2}$ inch.

ACONTIA IMITATA (Plate 149, Fig. 4, ♂).

Smaller than *A. intersepta:* forewing shorter, narrower, and less triangular in

shape, the longitudinal ferruginous-brown fascia also narrower and less defined, and the spots less distinct: hindwing darker ochreous-yellow. Body also darker coloured.

Expanse $1\frac{1}{4}$ inch.

From the Collection of the late Dr. Thwaites.

Genus LEOCYMA.

Leocyma, Guénee, Noct. ii. p. 212 (1852).
Chasmina, Walker, Catal. Lep. Het. B. M. ix. p. 146 (1856).

Male. Forewing moderately short and broad, costal margin slightly recurved, apex pointed, exterior margin erect, posterior margin convex towards the base; cell narrow, extending towards middle of the wing; costal vein recurved; subcostal branches curved upwards, first subcostal emitted at one-third before end of the cell, second at one-tenth, trifid, fifth and upper radial on a footstalk beyond end of the cell, the fifth touching third subcostal near its base; discocellular concave, lower radial from near its lower end; middle median from angle close to end of the cell, lower at one-third before the end; submedian recurved: hindwing short, broad, apex and exterior margin convex; two subcostals from end of the cell, discocellular bent below the middle, radial from the angle; two upper medians from end of the cell, lower at about one-third; submedian and internal vein slightly curved. Female: forewing somewhat longer; costa almost straight, exterior margin slightly oblique, posterior margin less convex: fifth subcostal from end of the cell; upper radial from slight angle at upper end of the discocellular. Body stout, thorax broad, palpi narrow, ascending to vertex, first joint laxly squamose, second joint long, compactly squamose, third joint thickish, conical; antennæ simple; legs stout, middle and hind tibiæ spurred.

LEOCYMA DIANÆ (Plate 149, Fig. 5).

Leocyma Dianæ, Guénee, Noct. ii. p. 213 (1852).
Chasmina glabra, Walker, Catal. Lep. Het. B. M. xxxii. p. 636 (1865).

Both wings pearly-white, smooth, shining, immaculate. Head with a ferruginous band in front; abdomen slightly ochreous above; palpi ochreous above; forelegs ochreous above, the fore femora with a longitudinal black streak, fore tibiæ and tarsi with black spots.

Expanse $1\frac{5}{8}$ to $1\frac{7}{8}$ inch.

Genus BRANA.

Brana, Walker, Catal. Lep. Het. B. M. xiii. p. 1099 (1857).

Male: forewing elongate, somewhat triangular; apex slightly rounded, exterior margin very oblique; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, trifid, third thrown off at one-fifth from base of second and

fourth at about one-third from base of the third, fifth from end of the cell, and slightly touching the third near its base; discocellular concave, bent at upper and near lower end, radials from the angles; middle median from angle close to end of the cell, lower at nearly one-half before the end; submedian curved: hindwing short, broad, apex very convex; two subcostals from end of the cell; discocellular concave, bent near lower end, radial from the angle; two upper medians from end of the cell, lower at nearly one-third before the end; submedian and internal vein straight. Body stout, abdomen extending beyond hindwing, tufted at apex; palpi ascending, compressed, second joint of uniform width, third joint linear, slightly widened at tip, about half length of the second; antennæ simple; legs thick, femora slightly pilose beneath, middle and hind tibiæ with long spurs.

BRANA CALOPASA (Plate 148, Fig. 6, ♂).

Brana calopasa, Walker, Catal. Lep. Het. B. M. xiii. p. 1100 (1857).

Male: forewing dull purplish-grey; with four transverse series of whitish-bordered blue-black spots, including the orbicular and reniform spots; and a broad outer black band, the inner border of which is whitish, the band being also traversed by a submarginal slender sinuous whitish line and crossed by white veins; cilia edged with white: hindwing blue-black, the apical border and cilia white. Thorax and head purplish-grey; thorax spotted with black, and the head with a black streak along the front; palpi black, the outer side of first and second joints white; legs black with white bands; abdomen black above, tip ochreous-red, thorax and abdomen beneath ochreous-red, the latter with black basal bands, anal tuft also black.

Expanse $2\frac{1}{8}$ inches.

Genus RAMADASA.

Ramadasa, Moore, Proc. Zool. Soc. 1877, p. 603.

Forewing moderately short, broad, costa slightly convex, apex obtuse, exterior margin oblique, posterior margin slightly lobed towards the base; costal vein short, ending at half length of the costa; cell broad; first subcostal emitted at two-fifths before end of the cell, second at one-fifth before the end, trifid, the third at one-fourth from base of the second, fourth at one-fifth from base of the third, fifth from end of the cell and touching the third by a short spur near its base; discocellular concave, bent at each end, radials from the upper and lower angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian slightly curved: hindwing short, trigonal, apex convex, exterior margin slightly produced in the middle, abdominal margin straight; cell short, not extending to half its length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at nearly one-

third before the end; submedian and internal vein nearly straight. Body stout, abdomen carinated above; thorax broad; head flattened above, pointed in front; palpi narrow, ascending, clothed with short adpressed scales, second joint long, third joint about one-fourth length of the second and rising to the vertex; antennæ simple; legs long, stout, tibiæ thick, clothed with stout hairy scales; middle and hind tibiæ with long spurs.

RAMADASA PAVO (Plate 149, Fig. 1).

Chasmina Pavo, Walker, Catal. Lep. Het. B. M. ix. p. 147 (1856).
Ramadasa Pavo, Moore, Proc. Zool. Soc. 1877, p. 603, pl. 59, fig. 8.

Forewing with the basal half covered with black-speckled olive-green scales, the base of the costal border being golden-yellow and black spotted; outer half of the wing pale pinkish-ochreous or flesh colour; the basal half bordered obliquely across middle of the wing by a slender deep black line, exterior to which is a diffused purplish-ferruginous band; reniform mark large, defined by an inner white-streaked black border and outer black spots, with a central ferruginous-bordered black lunular spot; from upper edge of the reniform mark a black streak extends inward to the costa, and before the apex is a prominent black angular streak, which is speckled with metallic-green scales; a blue-speckled black spot at base of the middle band, and a marginal row of black dots: hindwing and abdomen golden-yellow. Thorax and top of head olive-green, the scales black speckled; front of head, palpi, and legs golden-yellow; front of head with black bands, palpi tipt with black; forelegs with black bands, middle and hind legs with black spots; all the tarsi with black bands.

Expanse, ♂ $1\frac{6}{8}$, ♀ $1\frac{7}{8}$ inch.

Genus CARANDANA.

Forewing short, broad, costa convexly distorted near the apex and from which projects an overlapping tuft of long hairy scales, exterior margin convex, not oblique, posterior margin convex towards the base; costal vein curved upward to the distorted margin at its end; first subcostal emitted at one-half before end of the cell, second at one-sixth, bifid, fourth from end of the cell, bifid, and slightly joined to third for a short distance near its base; discocellular concave, radials from upper end and near lower end; middle median from close to end of the cell, lower at one-third before the end; submedian slightly curved: hindwing short, broad, exterior margin convex; two subcostals from end of the cell, discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body moderately stout; palpi ascending, long, narrow, second joint extending to level of the eyes, third joint cylindrical; antennæ simple; legs stout, pilose, middle and hind tibiæ spurred.

CARANDANA FASCICULOSA.

Acontia fasciculosa, Walker, Catal. Lep. Het. B. M. xv. p. 1760 (1858).

Male. "White: forewings pale fawn colour beyond the middle, with a thick costal tuft of curled hairs at two-thirds of the length; a broad short black streak in the disc adjoining the tuft, in front of which the costa is slightly convex; costa with black points: hindwings with black marginal points. Legs with black dots.

"Expanse 16 lines."

Genus PITACOTA.

Male: forewing elongate, costa almost straight, apex pointed, exterior margin slightly convex, oblique, and scalloped; first subcostal emitted at one-third before end of the cell, second at one-eighth, trifid, fifth from end of the cell, and touching third near its base; discocellular concave, bent near lower end, radials from upper end and lower angle; middle median from angle close to end of the cell, lower at one-third before the end; submedian recurved from the base: hindwing short, apex and exterior margin convex, slightly scalloped; two subcostals from end of the cell; discocellular obliquely concave, radial from near lower end; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body stout; thorax laxly clothed; palpi ascending, second joint rather long, compactly clothed, third joint cylindrical, half length of second; antennæ finely pectinated; legs moderate, femora fringed beneath, spurs long.

PITACOTA TERMINIGERA (Plate 149, Fig. 7).

Felinia terminigera, Walker, Catal. Lep. Het. B. M. xv. p. 1850 (1858).

Male. Cinereous-white: forewing white, the base and obliquely across the disc suffused with pale purplish-ochreous, and crossed by indistinct brownish sinuous bands, the middle and apex of the wing being white: hindwing whitish, with an indistinct cinereous discal band and a marginal band. Thorax pale purplish-ochreous, third joint of palpi ochreous; legs with slender blackish bands; abdomen cinereous-white, tuft brownish.

Expanse $1\frac{1}{2}$ inch.

Genus TARACHE.

Tarache, Hübner, Verz. bek. Schmett. p. 261 (1818-25); Stephens, Ill. Haust. iv. p. 412.
Acontia (part), Ochsenheimer, Eur. Schmett. iv. p. 91 (1816).

Wings small: forewing short, triangular; cell long, narrow, extending two-thirds the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end of the cell and touching third close to its base; discocellular obliquely concave, bent near each end, radials from the angles; middle

median from close to end of the cell, lower at one-third before the end; submedian curved: hindwing short, apex convex, exterior margin oblique; two subcostals from end of the cell; discocellular oblique, radial from near lower end; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal vein straight. Body moderately stout; palpi porrect, decumbent in front, laterally compressed, laxly squamose beneath, second joint not extending beyond the head, third joint small, conical; antennæ simple; legs long, squamose, femora slightly fringed beneath, middle and hind tibiæ spurred. (*Typical species*, T. solaris.)

TARACHE TROPICA (PLATE 150, FIG. 2).

Acontia tropica, Guénee, Noct. ii. p. 217 (1852).

Forewing pale yellow in male, yellowish-white in female; crossed by basal and subbasal olive-brown irregularly angulated blotched bands; an irregular recurved discal more distinct band. the upper end of which is bent inward to the costa, the outer discal area being streaked with purplish-brown; the extreme outer margin with two or three black speckles below the apex and above the posterior angle, the cilia in front of these speckles being purplish-brown; a distinct small round olive-brown orbicular and reniform spot: hindwing pale dull yellow, with pale brownish outer border. Thorax, head, palpi, and legs yellowish-white; forelegs with olive-brown bands.

Expanse $\frac{7}{8}$ inch.

TARACHE SIGNIFERA (PLATE 150, FIG. 4).

Acontia signifera, Walker, Catal. Lep. Het. B. M. xii. p. 793 (1857).
Acontia subfixa, Walker, *id.* xxxv. p. 1964 (1866).

Creamy-white: forewing with some brown speckles along base of the costa; a broad outwardly oblique transverse medial angulated brown band, beyond which the wing is more or less brown and is crossed by a discal and a submarginal denticulated white line; between the latter lines the veins are mostly black streaked, and between the medial band and discal line the reniform mark is defined by two black dots, and is bordered by a black streak in front; along the outer margin is a row of black dots: hindwing with pale brownish outer border. Palpi, and legs, with blackish bands.

Expanse $\frac{6}{10}$ inch.

TARACHE OLIVEA (PLATE 150, FIG. 3).

Acontia olivea, Guénee, Noct. ii. p. 217 (1852).

Forewing pale olivaceous-yellow, with a very indistinct transverse basal and a medial olive-brown fascia; a black-speckled reniform spot, from which a more distinct olive-brown fascia curves to the apex, the fascia being slightly black speckled below the apex: hindwing olivaceous-white. Body olivaceous-white.

Expanse, ♂ $\frac{6}{8}$, ♀ $\frac{7}{8}$ inch.

TARACHE INDA (Plate 150, Fig. 5).

Acontia Inda, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 108, fig. 23 (1874).

Forewing deep yellow, with a broad outer marginal golden-yellow band; the inner margin of the band being oblique and waved, and is bordered by a recurved purple-brown narrow band, which is indistinctly bent inward at the costal end: hindwing pale whitish-ochreous; the outer border brownish. Body deep yellow; palpi and legs above ochreous-brown; tarsi with pale bands.

Expanse $\frac{8}{10}$ inch.

TARACHE DESTITUTA (Plate 150, Fig. 6).

Acontia destituta, Walker, MS. Brit. Mus. Cabinet.

Pale brownish-ochreous: forewing with four or five transverse basal slender brown sinuous lines, a recurved medial brownish sinuous band, followed by two parallel discal lines, the upper portion of the band darker brown, and the two discal lines ending on the costa in a broad triangular dark brown patch; at end of the cell is a distinct narrow reniform mark; exterior margin with a row of blackish dots: hindwing and abdomen dull pale ochreous-brown. Palpi and legs with dark brown bands.

Expanse $\frac{7}{10}$ inch.

Genus BAGÂDA.

Bagada, Walker, Catal. Lep. Het. B. M. xv. p. 1753 (1858).

"Female. Wings moderately broad: forewings straight along the costa, rectangular at the tips; exterior border hardly denticulated, very oblique hindward. Body rather stout; palpi pilose, obliquely ascending; third joint linear, rounded at the tip, about half length of the second; antennæ simple; abdomen slightly crested at the base; legs stout, slightly pilose; hind tibiæ with very long spurs."

BAGADA PYROCHROMA.

Bagada pyrochroma, Walker, Catal. Lep. Het. B. M. xv. p. 1753 (1858).

"Female. Reddish: forewings mostly testaceous in front, with a whitish testaceous costal subapical patch; a black subquadrate discal spot, near which the exterior line is indistinctly visible; some few elongated whitish points in the disc; marginal points black; interior border cinereous: hindwings cinereous, somewhat brownish towards the exterior border; cilia pale. Head and fore part of thorax brown; abdomen cinereous.

"Expanse 13 lines."

Genus HICCODA.

Hiccoda, Moore, Desc. Lep. Coll. Atk. p. 134 (1882).

Wings small: forewing lengthened, narrow; costa slightly arched at base,

exterior margin oblique, convex; costal vein extending two-thirds the margin; first subcostal branch emitted at one-half before end of the cell; second trifurcate, emitted from end of the cell, third and fourth at equal distances from base of second, fifth also from end of the cell and touching third near its base; discocellular very slender, radials from near upper and lower end; middle median one-sixth before end of the cell, lower at one-third before its end; submedian curved: hindwing triangularly ovate; costal vein straight, extending to apex; two subcostals emitted beyond end of the cell; discocellular concave anteriorly and angled near lower end, radial from the angle; two upper medians from some distance beyond end of the cell, lower at one-third before its end; submedian and internal vein straight. Body small; palpi small, porrect, laxly squamose, second joint projecting beyond the head, third joint short; legs squamose; antennæ setulose.

HICCODA DOSAROIDES (Plate 150, Fig. 16).

Hiccoda dosaroides, Moore, Desc. Lep. Coll. Atk. p. 135 (1882).

Pale ochreous-yellow: forewing with a large quadrate dark brown discocellular spot, a costal streak above it, some speckled spots at its base, a curved duplex streak below the cell, and a transverse discal sinuous pale yellow line with brown points; a slight brown fascia below the apex; a marginal row of brown dots: hindwing cinereous-grey. Body pale ochreous. Underside ochreous-yellow, numerously covered with brown speckles.

Expanse $\frac{8}{12}$ inch.

Has much the appearance of Dosara, a genus of Pyrales.

Genus NARANGA.

Naranga, Moore, Proc. Zool. Soc. 1881, p. 359; Desc. Lep. Coll. Atk. p. 134.

Wings small: forewing elongated, narrow, acute at the apex, exterior margin oblique: hindwing slightly elongated and narrow. Veins similar to those in Xanthodes. Palpi small, smooth, slightly ascending, third joint minute, slender, short; legs slender, smooth.

NARANGA DIFFUSA (Plate 150, Fig. 17).

Xanthodes diffusa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 779 (1865).
Naranga diffusa, Moore, P. Z. S. 1881, p. 359.

Forewing yellow, with a slight medial oblique short purplish-red band, a less distinct streak below the apex, and a spot above posterior angle: hindwing whitish-yellow. Body, palpi, and legs above yellow.

Expanse $\frac{7}{8}$ inch.

Genus CHURIA.

Churia, Moore, Proc. Zool. Soc. 1881, p. 359; Desc. Lep. Coll. Atk. p. 135.

Forewing elongated, narrow, rectangular; costal vein extending to two-thirds the margin; first subcostal emitted at one-half and second at one-eighth before end of the cell, second trifurcate, third and fourth at equal distances from base of second, fifth from end of the cell and slightly touching third at its base; discocellular bent at its upper and lower end and very convex in the middle, radials from the angles; upper median branch from end of the cell, middle branch from one-eighth and lower from beyond one-third before end of the cell; submedian slightly curved at the base: hindwing short; costal vein straight, extending to apex; two subcostal branches from end of the cell; discocellular obliquely concave; radial from its lower end immediately above angle of the cell; two upper median branches from beyond end of the cell, lower from one-third before the end; submedian and internal veins straight. Body stout, abdomen long; palpi porrect, second joint laterally broad at the tip, clothed with coarse lax scales, third joint short, thick, half length of the second; legs stout, squamose; antennæ setose.

CHURIA MACULATA (Plate 150, Fig. 7).

Churia maculata, Moore, P. Z. S. 1881, p. 360.

Male. Upperside pale brownish-ochreous; cilia ochreous-white: forewing with a small black spot on middle of discocellular veinlet, and three equidistant spots on the submarginal border. Underside paler ochreous, palest along posterior border of forewing and on the hindwing. Palpi, and legs above brownish-ochreous.

Expanse $\frac{10}{12}$ inch.

Family HELIOTHIDÆ.

Imago of moderate or small size. Body smooth; thorax stout; tibiæ armed with spines. Flight mostly diurnal. Larva cylindrical, not attenuated; with sixteen legs. Feeds exposed on low plants, preferring the flowers. Pupa subterranean.

Genus HELIOTHIS.

Heliothis, Hübner, Tentamen, p. 2 (1806); Ochsenheimer, Schmett. Eur. iv. p. 91 (1816); Guénee, Noct. ii. p. 177; Walker, Catal. Lep. Het. B. M. xi. p. 680; Moore, P. Z. S. 1881, p. 361.
Melicleptria (part), Hübner, Verz. bek. Schmett. p. 262 (1818-25).
Heliotis, Sodoffsky, Bull. Soc. Imp. Mosc. pt. vi. p. 15 (1837).

Forewing elongated, costa slightly arched towards the end, apex pointed, exterior margin oblique, convex hindward, posterior margin slightly recurved; cell long, extending to three-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at one-third from base of second, and fourth

at one-fourth from base of third, fifth from end of the cell, and slightly joined by a short spur to third near its base; discocellular slender, bent in the middle, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at one-third before the end; submedian curved beyond the base: hindwing short, exterior margin oblique, convex, waved; cell extending to nearly half the length; two subcostals from end of the cell; discocellular very slender, oblique, concave, radial very slender, emitted from the middle; two upper medians from end of the cell, lower at one-fifth before the end; submedian and internal vein slightly recurved. Body stout, smooth; palpi porrect, extending half length beyond the eyes, pilose beneath, third joint short, obtusely conical; antennæ minutely pubescent; legs moderately stout, femora fringed beneath, fore tibiæ rather long, narrow, armed with two slender spines in front and shorter spines at the sides, middle and hind tibiæ also spined at the sides, and with long spurs.

Type, H. dipsacea.

HELIOTHIS ARMIGERA (Plate 150, Fig. 1, ♂, 1*a*, larva).

Noctua armigera, Hübner, Noct. pl. 79, fig. 370 (1804); Duponchel, Lep. Fr. vii. p. 310, pl. 119, f. 5, 6.
Heliothis armigera, Treitschke, Schmett. Eur. v. 3, p. 230; Guénee, Noct. ii. p. 181; Walker, Catal. Lep. Het. B. M. xi. p. 683.

Pale brownish olivaceous-ochreous: forewing crossed by very indistinct zigzag antemedial and denticulated discal duplex brownish lines, followed by a dark fascia which is bordered by a zigzag submarginal line; the outer discal line with a row of minute black points; a small dusky brown orbicular spot and a more distinct reniform mark; a marginal row of minute black dots: hindwing paler; semidiaphanous towards the base, veins brown, with a dusky brown marginal band, which has a pale exterior streak in its middle; a slight brownish lunule at end of the cell.

Expanse $1\frac{1}{4}$ to $1\frac{1}{2}$ inch.

Larva elongated, green, palest above; with a darker dorsal line, and two yellowish sublateral lines; three anterior segments transversely speckled with purple-brown and black spots; fifth to eleventh segment with a large lateral purple-brown black-spotted blotch, the eleventh segment also with an irregular black dorsal mark. Pupa reddish.

"Feeds on Rosebuds, &c." (*Thwaites.*)

Genus ADISURA.

Adisura, Moore, Proc. Zool. Soc. 1881, p. 367; Desc. Lep. Coll. Atk. p. 136 (1882).

Forewing comparatively short and broad, triangular, costa nearly straight, apex very acute, exterior margin oblique and even, posterior margin short; first subcostal branch emitted from half length of the cell, second near the end, trifurcate, the third

and fourth at equal distances from base of second, fifth curved upward from end of the cell and touching the third close to its base; discocellular concave, slightly bent near its lower end; upper radial from end of the cell, lower from angle of discocellular; upper median branch from angle above end of the cell, middle branch from the end, lower at some distance before its end: hindwing triangular, rather broad and short: costa nearly straight, exterior margin convex and much waved, abdominal margin short; two subcostal branches emitted from end of the cell; discocellular very slender, slightly concave; radial extremely slender, emitted from middle of discocellular; two upper median branches from slightly beyond end of the cell, lower from one-third before its end. Body short, stout; palpi stout, laxly squamose, apical joint thick, short; legs laxly pilose; antennæ minutely pectinated in male.

Type, A. Atkinsoni.

ADISURA PALLIDA (PLATE 150, FIG. 8).

Adisura pallida, Moore, P. Z. S. 1881, p. 369.

Male: forewing very pale purplish greyish-ochreous, with the costal edge and a longitudinal fascia extending along the median and submedian to outer margin very pale ochreous-brown; a few minute black speckles on costal and posterior borders; a curved discal transverse row of minute black points; cilia edged with white: hindwing ochreous-white, with an indistinct pale brown medial submarginal fascia. Underside ochreous-white. Thorax and head ochreous-grey; palpi at the side, and legs above ochreous-brown.

Expanse $1\frac{1}{10}$ inch.

Family ANTHOPHILIDÆ.

Imago small; antennæ short; abdomen slender, smooth; forewing thick; in repose forming a very inclined roof. (*Stainton.*)

Larva smooth, with twelve or fourteen legs; feeds exposed on low plants. Pupa in a slight cocoon amongst moss.

Genus ANTHOPHILA.

Anthophila, Hübner, Tentamen, p. 2 (1806); Ochs. Schmett. Eur. iv. p. 93 (1816).

Porphyrinia, Hübner, Verz. bek. Schmett. p. 256 (1818-25).

Eromene, Hübner, Verz. bek. Schmett. p. 256.

Heliomanes,* Sodoffsky, Bull. Soc. Imp. Mosc. pt. vi. p. 16 (1837).

Micra,* Guénee, Ann. Soc. Ent. Fr. x. p. 225 (1841); Noct. ii. p. 241; Walker, Catal. Lep. Het. B. M. xii. p. 820.

Thalpochares (part), Lederer, Noct. Eur. p. 184 (1857).

Wings small; forewing triangular, costa straight, apex acute, exterior margin

* Previously used.

oblique, slightly convex; cell narrow, extending to about three-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell, free; discocellular slightly bent close to each end, radials from the angles; middle median from close to end of the cell, lower at nearly one-half before the end; submedian straight: hindwing broad, exterior margin convex; cell extending to half the length, two subcostals from end of the cell; discocellular oblique, radial from below the middle; two upper medians from end of the cell, lower at one-half before the end; submedian and internal vein straight. Cilia broad. Body slender, thorax broad; palpi ascending, fusiform, squamose, second joint thickish and reaching level of the eyes, third joint short, conical; legs squamose; antennæ finely ciliated.

Type, P. purpurina.

ANTHOPHILA DEROGATA (Plate 150, Fig. 18).

Micra derogata, Walker, Catal. Lep. Het. B. M. xii. p. 825 (1857).

Forewing pale yellow, with a broad oblique discal crimson band traversed by a violet-purple recurved fascia from the apical end, and marked by a geminated yellow streak above the posterior angle, the band is also bordered on each side by an olive-brown line: hindwing yellowish-white, with a slight brownish marginal border. Body, palpi, and legs yellowish-white.

Expanse $\frac{5}{10}$ to $\frac{7}{10}$ inch.

ANTHOPHILA DIVISA (Plate 150, Fig. 10).

Thalpochares divisa, Moore, Proc. Zool. Soc. 1881, p. 371.

Male and female. Yellow: forewing with a broad outer dark ochreous-yellow band occupying half the wing, the inner border of the band formed by a delicate black line broadly suffused outwardly across the disc with purple-red, the exterior margin of the wing also purple-red and traversed by a slender white line, on which are a few minute black dots; two indistinct black dots also at end of the cell: hindwing with a slight ochreous outer margin. Body and legs yellow; tarsi with pale purplish-red bands.

Expanse $\frac{5}{8}$ inch.

ANTHOPHILA HEMIRHODA.

Micra hemirhoda, Walker, Catal. Lep. Het. B. M. xxxiii. p. 799 (1865).
Anthophila roseifascia, Walker, *id.* xxxiii. p. 803.
Thalpochares adulans, Felder et Rogen. Novara Reise, Lep. iv. pl. 108, fig. 11 (1874).

Lemon-yellow: forewing with a broad crimson band extending obliquely across the disc, and a similar narrower band along the exterior margin: hindwing with a

pale brown marginal band tinged with crimson at the anal end. Body, palpi, and legs yellow; palpi tinged with pale crimson at the side; legs with pale crimson bands.

Expanse $\frac{3}{4}$ to 1 inch.

Genus EUBLEMMA.

Eublemma, Hübner, Verz. bek. Schmett. p. 256 (1818-25).
Porphyrinia (part), Hübner.
Anthophila (part), et *Micra* (part), Guénee.
Thalpochares (part), Lederer.

Wings shorter and broader than in typical Anthophila: forewing more triangular in form: hindwing shorter and more convex externally; venation similar. Palpi somewhat stouter, less fusiform in shape, broader laterally at the base, and clothed with longer scales beneath, tip shorter and more obtuse.

Type, E. Amœna.

EUBLEMMA AMABILIS (Plate 150, Fig. 12).

White: forewing with a broad discal pale pinkish-violet band, the inner border of the band being darkest and indented to the end of the cell, the outer border being also darker and angled outward at the middle median vein, upper radial, and at the costal end; the entire angulated outer border is also bordered by a prominent white line, which is slightly speckled with black scales; the marginal border of the wing and the cilia is suffused with pale pinkish-violet: hindwing with a similar pinkish-violet discal band, which is waved and angular only towards the lower end, the outer border line is also pale pink and distinctly speckled with black scales along its entire length; the outer border of the wing and the cilia is also suffused with pale pinkish-violet. Body, palpi, and legs white.

Expanse $\frac{9}{10}$ inch.

Genus PARACRAMA.

Forewing short, broad, rectangular; exterior margin almost erect, posterior margin convex towards the base; cell disposed towards middle of the wing, and extending somewhat more than half the length; first subcostal emitted about two-thirds before end of the cell, second at one-fifth, trifid, fifth from end of the cell and joined by a short spur to the third near its base; discocellular outwardly oblique, bent near the ends, radials from the angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian slightly curved at the base: hindwing short, apex convex, exterior margin slightly angular in the middle; cell extending half the length; two subcostals from end of the cell; discocellular bent in the middle, radial from lower end; two upper medians from extreme end of the

cell, lower at one-fourth before the end; submedian and internal vein straight. Body moderately stout, abdomen carinated above; palpi ascending, slender, squamose, second joint extending to level of the eyes, third joint long, of the same length as second; antennæ simple; legs squamose, middle and hind tibiæ with very long spurs.

PARACRAMA DULCISSIMA (Plate 150, Fig. 11, ♂).

Nolasena dulcissima, Walker, Journ. Linn. Soc. Zool. vii. p. 76 (1864); Catal. Lep. Het. B. M. xxxiii. p. 860.

Male and female: forewing grass-green, crossed by an outwardly oblique antemedial and an erect postmedial slender indistinct whitish line, and a slender angular-bordered purplish-brown marginal baud; the extreme costal edge speckled with purplish-brown scales and streaked with white; cilia purple-brown: hindwing very pale pink, whitish towards the base. Thorax and head grass-green, abdomen pinkish-ochreous above; palpi purplish-ochreous above, whitish beneath; legs white, front and middle legs with purple-brown bands.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{7}{8}$ inch.

Genus PHYLLOPHILA.

Phyllophila, Guénee, Noct. ii. p. 254 (1852).

Wings small: forewing elongated, narrow, triangular; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell, touching the third at half way between its base and the fourth; discocellular obliquely concave, radials from the upper end and near lower end; middle median from angle close to end of the cell, lower at one-third before the end; submedian slightly recurved: hindwing rather long, exterior margin oblique, waved; cell extending half the length; two subcostals from end of the cell; discocellular obliquely concave, radial from below the middle; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body small, narrow; palpi porrect, long, narrow, squamose, second joint projected half beyond the head, third joint short; antennæ setose; legs squamose, middle and hind tibiæ stout, clothed with hairy scales, spurred.

Type, P. Wimmerii.

PHYLLOPHILA MODESTA (Plate 150, Fig. 13).

Male and female pale dull ochreous-white: forewing numerously speckled with pale ochreous-brown scales; crossed by a very indistinct brown-speckled antemedial line and a postmedial line; a large brown-speckled reniform spot; a small black spot at base of the cell, some short black streaks along the edge of the costa, and a

marginal row of black dots: hindwing tinged with pale violaceous-brown externally. Body ochreous-white; front of thorax, head, palpi, and legs pale brown.

Expanse 1 inch.

Genus HYELA.

Hydrelia,* Guénee, Ann. Soc. Ent. Fr. x. p. 227 (1841); Noct. ii. p. 234; Walker, Catal. Lep. Het. B. M. xii. p. 812.

Hyela, Stephens, Catal. Brit. Lep. B. M. p. 149 (1850).

Wings short, broad: forewing triangular; cell broad, extending two-thirds the wing; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, fifth from end of the cell and touching third close to its base; discocellular outwardly oblique, slightly concave, radials from near upper and lower end; middle median from close to end of the cell, lower at one-half before the end; submedian slightly curved: hindwing very broad; exterior margin convex; cell broad, extending to half the length; two subcostals from end of the cell; discocellular outwardly oblique, concave, radial from below the middle; two upper medians from a footstalk one-third beyond end of the cell, lower at nearly one-half before the end; submedian and internal vein straight. Body slender; palpi porrect, narrow, compactly clothed, apex conical; antennæ simple; legs squamose.

Type, H. unca.

HYELA CURVIFERA.

Hydrelia curvifera, Walker, Trans. Ent. Soc. Lond. 3rd ser. i. p. 91 (1861).

"Female. Coffee-brown, whitish beneath. Forewings subfalcate, with a whitish marginal band, which contains the brown marginal dots; a whitish short curved stripe in the disc, forming a loop with the whitish subcostal stripe, which is interrupted and irregular exteriorly; the inclosed space blackish streaked: hindwings cinereous-brown. Head white in front; palpi porrect, short, securiform, extending a little beyond the head; antennæ smooth, short; thorax white on each side.

"Expanse 7 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the Saunders' Collection at Oxford University Museum.

HYELA LATIVITTA (Plate 150, Fig. 9).

Bankia lativitta, Moore, P. Z. S. 1881, p. 373.

Forewing pale chestnut-brown; basal third very obliquely white, the border defined by an irregular slender dark brown line; an oblique discal white band extending from posterior angle to the costa and enclosing two black discocellular

* Previously used by Hübner for a genus of Lepidoptera.

dots, the costal end projecting obliquely outward and again indistinctly merging into the band on the disc; an oblique dark brown-speckled fascia from the apex: hindwing cinereous-brown. Cilia whitish with a blackish line. Thorax white; abdomen cinereous, brown speckled; legs with brown bands.

Expanse $\frac{8}{10}$ inch.

Genus ODICE.

Odice, Hübner, Verz. bek. Schmett. p. 258 (1818-25).

Microphisa,* Boisduval, Index Meth. p. 170 (1840).

Microphysa, Guén. Ann. Soc. Ent. Fr. x. p. 233 (1841); Walker, Catal. Lep. Het. B. M. xii. p. 833.

Forewing elongated, rather broad, triangular; cell extending to half the length; first subcostal emitted at two-fifths before end of the cell, second at one-ninth, trifid, fifth from end of the cell, free; discocellular bent close to each end, slightly concave in the middle, radials from the angles; middle median from angle close to end of the cell, lower at two-fifths before the end; submedian almost straight: hindwing short; cell broad, extending to half the length; apex and exterior margin convex, abdominal margin short; discocellular bent near lower end, radial from the angle; two subcostals from end of the cell; two upper medians from a footstalk at a short distance beyond end of the cell, lower at one-third before the end; submedian and internal vein straight. Cilia broad. Body small, moderately stout, abdomen not extending beyond hindwings; palpi ascending, reaching to the vertex, fusiform, compactly squamose, apex short, conical; antennæ finely pectinated to the tip; legs squamose, somewhat long, middle and hind tibiæ with long spurs. (*Type*, O. inamæna.)

ODICE TRANSVERSA (Plate 150, Fig. 15).

Male and female: forewing greyish violet-brown; with a short black recurved streak below base of the cell, a black transverse waved subbasal line, a broad brownish-white medial transverse band with black-speckled borders, the band being traversed along its outer border by a pale brown line; outer area of the wing with black streaks along the veins and crossed by a slender greyish-white zigzag submarginal line; cilia greyish-white: hindwing and abdomen cinereous-brown. Thorax, head, and palpi violet-brown; legs cinereous-brown, with darker brown tarsal bands.

Expanse, ♂ $\frac{8}{10}$, ♀ $\frac{9}{10}$ inch.

Hab. Ceylon.

Allied to *O. abscissa*, from S. Africa.

Genus MARADANA.

Forewing elongate, narrow, exterior margin slightly oblique and convex; cell extending more than half the length; first subcostal emitted at one-fourth before

* Used for a genus of Hemiptera in 1834, by Westwood.

end of the cell, second from close to the end, third trifid, from end of the cell, fourth at one-third and fifth at one-half from base of third; discocellular slightly concave, radials from upper and lower end; middle median from close to end of the cell, lower at nearly one-third before the end; submedian straight: hindwing short, apex and exterior margin convex; costal vein straight; subcostal running very close to the costal; two subcostal branches from end of the cell, upper branch extending very close alongside of the costal; cell extending to one-third the length; discocellular obliquely concave, radial from lower end; middle median from close to end of the cell, lower at nearly one-half before the end; submedian and internal vein straight. Body moderately slender, abdomen slightly tufted at apex; palpi ascending to level of the eyes, fusiform, laxly squamose beneath, apex short, conical; antennæ finely bipectinated; legs rather thick, tibiæ stout, clothed with strong hairy scales, middle and hind tibiæ spurred.

MARADANA RIVULATA (Plate 150, Fig. 14).

Purplish-red: forewing speckled with black and grey scales; crossed by an antemedial and a postmedial slightly waved slender yellow band, the inner border of the bands black speckled; a black-speckled spot at end of the cell; a pale yellow interciliary line: hindwing paler purplish-red, brownish towards the base; crossed by a discal curved pale yellow slender band; interciliary line pale yellow. Body brown; palpi brown; legs dark purple-brown, middle and hind tarsi yellowish.

Expanse 1 inch.

Family PALINDIIDÆ.

Wings rather broad, shining, with distinct bands, and generally with metallic colours; body slender. (*Walker.*)

Genus HOMODES.

Homodes, Guénee, Noct. ii. p. 280 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 852.

Male: forewing elongated, somewhat narrow, costa arched, exterior margin very oblique, hardly convex, posterior margin rounded at the base; cell extending to half the length; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, trifid, third at one-fifth from base of the second, and fourth at two-thirds from base of the third, fifth from end of the cell and joined by a short spur to the third close to its base; discocellular very slender, concave, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at one-half before the end; submedian very deeply curved from the base: hindwing very short, triangular, apex and anal angle convex, exterior margin very

oblique; cell short, extending to one-third the length; two subcostals from end of the cell; discocellular very slender, outwardly oblique, concave, radial from below the middle; two upper medians from end of the cell, lower at nearly one-half before the end; submedian and internal vein straight. Body moderately slender; palpi ascending, stout, short, hardly reaching to the level of the eyes, fusiform, laxly squamose, very indistinctly articulated, tip minute, conical; antennæ minutely ciliated; legs stout, fore femora clothed with very long hairs, middle and hind spurs long.

HOMODES CROCEA (Plate 151, Fig. 11).

Homodes crocea, Guénee, Noct. ii. p. 280, pl. 11, fig. 2 (1852).
Homodes vivida, Guénee, *id.* p. 280.

Dark saffron-yellow; all the markings bordered with ochreous-red: forewing with a violet-brown transverse basal, a subbasal, and a postmedial sinuous band, a broader waved medial band, and a lunular outer discal band, all traversed by metallic silvery speckles; between the postmedial and outer discal line is a paler violet zigzag band without silvery speckles; and along the outer border of the wing is a submarginal row of black linear spots, and a marginal row of violet-grey triangular spots; a prominent dark violet-brown raised orbicular spot, and two similar spots at end of the cell, each speckled with metallic-silvery scales: hindwing with transverse medial, postmedial, and outer discal violet-brown silvery-speckled bands, an intermediate paler discal zigzag band, and submarginal black linear spots; cilia alternated with violet-brown and red. Body, palpi, and legs above ochreous-red.

Expanse $1\frac{1}{4}$ inch.

Family ERIOPIDÆ.

Forewing often angular on exterior border; with distinct lines. Thorax and abdomen crested; antennæ more or less distorted and bent in the male, minutely pectinated. Larva with sixteen feet, cylindrical. Pupa subterranean.

Genus CALLOPISTRIA.

Callopistria, Hübner, Verz. bek. Schmett. p. 216 (1818-25); Moore, Desc. Lep. Coll. Atk. p. 143 (1882).
Lagopus,* Latr. N. Dict. H. N. xvii. p. 199 (1816 ?)
Eriopus, Treitschke, Schmett. Eur. v. 1, p. 365 (1825).

Forewing acuminate at the apex; exterior margin oblique, angular in the middle, scalloped; first subcostal emitted at half length of the cell, second close to end of the cell, trifid, third and fourth at nearly equal distances apart from base of second,

* Previously used for a genus of Birds.

fifth from end of the cell and anastomosing with third for a short distance above its base; discocellular slightly concave, bent at each end, radials from the angles; middle median from angle close to end of the cell, lower at one-third before its end: hindwing longer than broad, exterior margin convex, scalloped; two subcostal branches from end of the cell, discocellular slightly concave; radial from near lower end; two median branches from end of the cell, third at about one-fourth before its end. Thorax laxly pilose; antennæ minutely bipectinate, more or less distorted and bent at half its length in the male; palpi slightly ascending, second joint laterally broad, widest and pointed in front, pilose, third joint long, slender, cylindrical; femora, tibiæ, and fore tarsi densely and laxly clothed with hair in the male, less so in the female, spurs strong.

Type, C. Pteridis.

CALLOPISTRIA RECURVATA (Plate 151, Fig. 1, ♂).

Callopistria recurvata, Moore, Desc. Lep. Coll. Atk. p. 144 (1882).

Forewing dark rufous-brown, veins lined with silvery-white; some silvery-white bordered black subbasal transverse zigzag lines; a silvery-white antemedial straight duplex line, which is bent outward at the median vein, lunate orbicular and reniform marks, a recurved postmedial pale bordered duplex line, and zigzag short streaks below the apex; the basal, costal, and apical interspaces between the veins blackish-brown, the discal area brightest and traversed by a black sinuous line ending in a white spot beyond lower end of the cell; two black-bordered white zigzag lines below the apical streak: hindwing brown, with paler interciliary line. Thorax rufous-brown, collar black streaked; abdomen brown; legs with blackish-speckled bands.

Expanse $1\frac{1}{8}$ to $1\frac{3}{8}$ inch.

CALLOPISTRIA EXOTICA.

Callopistria exotica, Guénee, Noct. ii. p. 294 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 865.

Smaller than *C. recurvata*, and of a paler colour: forewing with the vein lines indistinct, the antemedial transverse duplex line entirely convex, which gives the reniform mark a wider interspace; and the postmedial duplex line is more convexly recurved in crossing the disc, the intervening area between the two lines being thus conspicuously broader.

Expanse $\frac{7}{8}$ to 1 inch.

Genus METHORASA.

Methorasa, Moore, Proc. Zool. Soc. 1881, p. 374.

Allied to Callopistria: forewing less acuminate, exterior margin less oblique and with a more even cilial edge; first subcostal branch and the lower median emitted

comparatively nearer the end of the cell: hindwing more convex externally; cell broader; discocellular more erect. Thorax more compactly clothed; palpi smaller, second joint of uniform lateral width, third joint very short and thick; antennæ in male of the normal form and more minutely bipectinate; legs less pilose.

Type, M. Latreillii.

METHORASA THWAITESII (Plate 151, Fig. 2).

Pale greyish violaceous-brown: forewing with a black zigzag streak from base of the costa, a streak below base of the submedian vein, a transverse black antemedial sinuous duplex line, a recurved postmedial sinuous duplex line, with its costal end contiguous to a distinct black reniform spot; across the outer disc is a series of short black longitudinal streaks, which form an irregular broad dentated submarginal band; along the outer margin is a row of small black dentate spots, the fourth and fifth from the apex being confluent and extend inward to the submarginal band: hindwing and abdomen pale violaceous-brown. Thorax, head, palpi, and legs pale greyish violaceous-brown; palpi and legs with dark blackish bands.

Expanse $1\frac{2}{10}$ inch.

Family EURHIPIIDÆ.

Forewing often angular and generally denticulated on the exterior border. Abdomen with small more or less divergent lateral tufts. (*Walker.*)

Larva with sixteen feet, glabrous, smooth, attenuated anteriorly. Pupa subterranean.

Genus PENICILLARIA.

Penicillaria, Guénee, Noct. ii. p. 302 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 870.

Forewing elongated, narrow, costa almost straight, apex pointed, exterior margin slightly angular below the apex and at the middle, and oblique hindward, posterior margin convex towards the base; cell long, narrow, extending more than half the length; discocellular slightly concave, radials from the upper end and near lower end; first subcostal emitted at more than one-half before end of the cell, second at one-sixth, trifid, fifth from end of the cell and touching the third near its base; middle median from angle immediately at end of the cell, lower at two-fifths before the end; submedian very deeply curved from the base: hindwing very short, apex convex, exterior margin slightly angular at end of the lower median; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body stout, thorax very stout, crested; abdomen in male

with lateral tufts at the apex; palpi porrect, stout, fusiform, laxly squamose beneath, second joint extending half beyond the eyes, third joint thick, pointed; antennæ bipectinated for half its length in male; legs stout, pilose, spurs long.

Type, P. nugatrix.

PENICILLARIA NUGATRIX.

Penicillaria nugatrix, Guénee, Noct. ii. p. 303, pl. 14, fig. 7 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 871.

Dark purplish-ferruginous: forewing crossed by an indistinct subbasal, antemedial, and a postmedial ochreous-grey line with brighter ferruginous borders, the subbasal line very indistinct, the antemedial line curved outward, the postmedial line irregularly recurving from the costa above the end of the cell, angulated outward below the median, and terminating at the posterior angle; a whitish angular line curves from before the apex to above middle of the posterior margin and thence to the lower angle; a dusky brown ochreous-grey bordered reniform spot: hindwing white, with purplish-ferruginous marginal band, and an indistinct blackish spot at end of the cell. Tarsi with white bands.

Expanse 1 inch.

PENICILLARIA JOCOSATRIX (Plate 151, Fig. 8, ♂, 8*a*, larva).

Penicillaria jocosatrix, Guénee, Noct. ii. p. 304 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 871.

Dark purplish violet-brown: forewing with a transverse blackish subbasal and a medial fascia, both bent outward below the cell and ending in a purplish-white costal spot; a blackish discal fascia which is darker across the disc and before the apex, where its border is defined by an outward curved whitish line, the latter line being continued and indented below the radial, from whence it is inwardly oblique and waved on reaching the posterior margin; a pale longitudinal streak extends from the angle of the inner fascia to the angle of the outer, the exterior margin has a slender white angular line continued from the curved subapical line; a slight dark reniform spot at end of the cell; the transverse areas between the fascias all suffused with purplish-grey: hindwing white, with a broad purplish violet-brown marginal band, and a small indistinct blackish spot at end of the cell. Body, palpi, and legs dark purplish violet-brown; tarsi with narrow white bands.

Expanse 1 to $1\frac{1}{8}$ inch.

Larva green, with a sublateral darker shade; a few fine short hairs from the spiracles; the segments speckled with small purple spots and a subdorsal row of larger spots. Pupa dark purple-red.

"Feeds on Terminalia Belerica, &c." (*Thwaites.*)

Genus TARGALLA.

Targalla, Walker, Catal. Lep. Het. B. M. xiii. p. 1007 (1857).
Cryassa, Walker, *id.* xv. p. 1745 (1858).
Penicillaria (part), Guénee.

Forewing broader than in typical Penicillaria, the exterior margin scalloped, angular in the middle: hindwing broader. Venation similar. Palpi somewhat smaller; antennæ simple in male; legs less pilose.

Type, T. infida.

TARGALLA INFIDA (Plate 151, Fig. 6, ♂, 6*a*, larva).

Targalla infida, Walker, Catal. Lep. Het. B. M. xiii. p. 1008 (1857).
Penicillaria ludatrix, Walker, *id.* xv. p. 1773 (1858).

Greyish violaceous-brown: forewing with the basal half darker brown, crossed by some indistinct black-speckled waved lines, the outer half of the wing hoary, and crossed by two very indistinct discal blackish-speckled denticulated lines, and two sinuous submarginal lines, the veins being lined with black and white streaks; a minute white orbicular spot, and narrow ferruginous reniform mark bordered by a pale whitish line; before the apex is a dark brown triangular costal spot bordered by three white costal dots; outer margin with a row of black points: hindwing brown, cinereous towards the base, and with cinereous-white streaks from above the anal angle, and blackish spots up the lower median and submedian veins. Cilia violet-brown. Thorax and head speckled with black; palpi blackish at the side; tarsi with blackish bands.

Expanse 1 to 1⅛ inch.

Larva green, paler on the sides; with a slender subdorsal whitish line and a row of small lateral spots. Pupa red, enclosed in a slight cocoon under portions of leaves and excrement.

TARGALLA SOLIDA.

Penicillaria solida, Walker, Catal. Lep. Het. B. M. xxxiii. p. 814 (1865).

"Male. Reddish; partly whitish beneath: forewings with a whitish straight oblique middle band, which contains the reniform mark, and is diffuse on the outer side, where it is bounded by the exterior line; the latter is brown, curved, very incomplete; submarginal line pale, denticulated, indistinct, partly bordered with brown, forming the outer side of a costal brown triangular spot, which includes three testaceous costal points; marginal points black; interior part with very indistinct undulating cinereous lines; reniform mark brown, very narrow, containing a testaceous line: hindwing brownish-cinereous; marginal festoon whitish. Palpi brown, partly whitish; thorax crested; abdomen crested at the base, with some pale

testaceous dorsal spots, testaceous towards the tip; the red part terminating in a blackish tinge, two apical lateral diverging tufts.

"Expanse 12 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

TARGALLA BIFACIES (Plate 151, Fig. 5, ♂, 5a, larva).

Cryassa bifacies, Walker, Catal. Lep. Het. B. M. xv. p. 1745 (1858).

Male: forewing ochraceous olive-green; crossed by an irregular zigzag indistinct blackish pale subbasal line, an antemedial and a medial line; a more distinct recurved discal denticulated white-bordered line, which is acutely pointed outward at the lower radial, followed by an ill-defined white-bordered zigzag submarginal line; a small white orbicular spot, and a narrow quadrate reniform mark, the latter with central ochreous-green streak; the area between the subbasal and antemedial lines and the lower half between the medial and discal lines and also the area between the latter and the submarginal line, excepting the triangular costal spot, is of a pale ochreous olivaceous-white; the veins across the disc with black and white streaks: hindwing dusky brown, cinereous-white towards the base; with pale testaceous-white waved transverse streaks from above anal angle, and a slender interciliary line. Body dull pale ochreous olive-brown; tegulæ black speckled, abdomen dusky at the base; palpi and legs whitish, with black bands.

Female: forewing with exactly similar but more distinct transverse lines; the pale interspaces of a testaceous tinge, and the dark spaces reddish-testaceous; the orbicular and reniform marks with black borders: hindwings and abdomen dusky violaceous-brown.

Expanse $1\frac{3}{10}$ to $1\frac{4}{10}$ inch.

Larva green, head paler; spiracles brown, from which project a few short fine hairs; a subdorsal and a lateral slender pale yellow line, the latter extending between the spiracles. Pupa violet-purple.

TARGALLA REPLETA.

Eutelia repleta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 821 (1865).
Eutelia impleta, Walker, *id.* p. 822 (1865).
Eutelia plusioides, Walker, *id.* p. 822 (1865).
Eurhipia prætexta, Felder, Reise Nov. Lep. iv. p. cxi. fig. 24 (1874).

Male. Forewing violaceous olive-brown; crossed by extremely indistinct basal, subbasal, and antemedial blackish-speckled sinuous lines, an oblique slightly curved whitish-bordered medial line ending at the reniform mark, followed by a discal slender black denticulated line, an outer discal recurved line, which is denticulated only at its posterior end, and a submarginal slender whitish zigzag line; a white punctiform

orbicular spot, and a curved whitish-lined reniform mark: hindwing dusky violaceous-brown, cinereous-white at the base, cinereous-white waved streaks from above anal angle, and a dark brown marginal lunular line. Abdomen violet-brown at the base; legs with blackish bands.

Female pale violaceous greyish-brown: forewing with the outer area from the curved medial line lilacine-grey; the discal transverse lines obsolescent posteriorly, except a small black spot ending the discal line; reniform mark whitish.

Expanse $1\frac{5}{10}$ inch.

This is probably only a varietal form of *C. bifacies*.

TARGALLA RESOLUTA.

Penicillaria resoluta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 815 (1865).

"Male. Fawn colour; paler beneath: wings slightly denticulated along the exterior border: forewings with black flecks, which form irregular and incomplete transverse lines; an incomplete bent whitish band beyond the exterior line, and a whitish angular incomplete submarginal line; a blackish irregularly triangular costal subapical spot containing the whitish costal dots; exterior border slightly bent; orbicular mark white, punctiform; reniform large, testaceous-white, oblong-subquadrate, slightly concave on the outer side: hindwings cinereous-brown, with a testaceous incomplete submarginal line. Wings beneath with three approximate exterior curved brown lines.

"Expanse 14 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

Genus EUTELIA.

Eutelia, Hübner, Verz. bek. Schmett. p. 259 (1818-25); Walker, Catal. Lep. Het. B. M. xii. p. 872.
Eurhipia, Boisd. Eur. Lep. Ind. Meth. p. 73 (1829); Guénee, Noct. ii. p. 305.

Forewing elongated, narrow, costa straight, slightly rounded at the tip, exterior margin denticulated and slightly angular in the middle, very oblique below the angle; cell extending to half length of the wing; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, third at one-third from base of second, fourth at two-thirds from base of the third, fifth from end of the cell and touching the third close to its base; discocellular very slender, concave, radials from the upper and near lower end; middle median from angle close to end of the cell, lower at nearly one-half; submedian deeply curved from the base: hindwing short, narrow, apex very convex, exterior margin denticulated; cell short, reaching one-third the length; two subcostals from end of the cell; discocellular slender, concave, radial from close to lower end; two upper medians from extreme end of the cell, lower at

one-third before the end; submedian and internal vein straight. Body moderately stout, thorax crested, abdomen with lateral tufts at the apex in male; palpi porrect, second joint thick, squamose, extending beyond the head, third joint long, cylindrical, of the same length as second; antennæ serrated and pectinated to half its length in male, simple in female; legs stout, pilose, spurs long. (*Type*, E. adulatrix.)

EUTELIA FAVILLATRIX.

Eutelia favillatrix, Walker, Catal. Lep. Het. B. M. xv. p. 1778 (1858).

Pale brownish-cinereous: forewing lilacine-grey along the costa; crossed by very indistinct basal undulated blackish lines, a curved white-bordered black duplex medial line, and a recurved discal sinuous duplex line, followed by an outer discal recurved single line, and a zigzag submarginal line; reniform spot red, bordered by a white line; a pale ochreous-white patch at the apex: hindwing pale cinereous, with brownish veins and marginal border. Thorax with reddish bands; abdomen with some metallic-blue scales at the base, palpi and legs with blackish bands.

Expanse $\frac{9}{10}$ inch.

EUTELIA CINCTIPALPIS.

Eutelia cinctipalpis, Walker, Catal. Lep. Het. B. M. xxxiii. p. 820 (1865).

"Female. Pale cinereous, slightly tinged with ferruginous; dark cinereous beneath: forewings with a brown dot in the disc, and with four exterior denticulated brown lines; a brown irregular submarginal band; marginal line brown; exterior border slightly convex, very oblique: hindwings with lines somewhat like those of the forewings, but less distinct.

"Expanse 18 lines."

Genus VARNIA.

Varnia, Walker, Journ. Linn. Soc. Zool. vii. p. 69 (1864).

Forewing short, triangular, moderately broad at the end, costa arched towards the apex, exterior margin angular below the middle, scalloped below the angle; cell extending beyond half the length; subcostals free, first emitted at nearly one-half before end of the cell, second at one-sixth, third and fourth at equal distances from the second, fifth from end of the cell; discocellular bent near each end, concave in the middle, radials from the angles; middle median from one-fifth before end of the cell, lower at two-fifths; submedian very concave towards the base: hindwing short, broad, exterior margin convex, scalloped; cell broad, extending to half the length; costal vein much recurved; subcostal touching the costal before end of the cell; two subcostals from end of the cell; discocellular bent in the middle, convex at the ends, radial from close to the lower end; middle median from close to end of the cell, lower

at one-fourth before the end; submedian and internal vein curved. Body very stout, abdomen conical; palpi ascending, second joint reaching to vertex, flattened in front and at the side, roughly squamose, third joint lanceolate, about half length of the second; antennæ stout, simple; legs stout, most densely clothed with thick hairy scales, spurs long. (*V. ignita.*)

VARNIA TAPROBANA (Plate 151, Fig. 7).

Dusky greyish-ferruginous; forewing crossed by a basal, a curved medial, and a discal greyish-black band, the discal band dilated at the costal end; a similar coloured oblique streak from the posterior angle and another below the apex; between all the bands and the streaks are slender indistinct blackish sinuous lines: hindwing crossed by several indistinct blackish sinuous lines; a semi-diaphanous white geminated spot at end of the cell. Body, palpi, and legs ferruginous-brown.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Genus CHLUMETIA.

Nachaba,* Walker, Catal. Lep. Het. B. M. xxvii. p. 813 (1863).
Chlumetia, Walker, *id.* xxxiv. p. 1271 (1865).

Wings small: forewing elongated, costa slightly arched, apex rounded, exterior margin slightly oblique and convex; cell disposed towards the middle of the wing, extending to half the length; first subcostal emitted at one-half, second at one-sixth, trifid, fifth from end of the cell and slightly touching third close to its base; discocellular slender, concave, radials from upper and lower end; two upper medians from end of the cell, lower at one-fifth; submedian slightly recurved: hindwing short, narrow, exterior margin convex; cell extending to one-third the length; two subcostals from end of the cell; discocellular slender, concave, radial from lower end; two upper medians from extreme end of the cell, lower at one-third; submedian and internal vein recurved. Body short, stout, thorax and abdomen crested; palpi stout, obliquely ascending, second joint laxly squamose, laterally widened in front, third joint short, conical; antennæ stout, minutely pubescent; legs stout, squamose, middle and hind spurs very long.

CHLUMETIA TRANSVERSA (Plate 151, Fig. 3).

Nachaba transversa, Walker, Catal. Lep. Het. B. M. xxvii. p. 114 (1863).
Chlumetia guttiventris, Walker, *id.* xxxiv. p. 1271 (1865).

Forewing violaceous-grey; crossed by two indistinct black-speckled grey-bordered basal, subbasal, medial, and discal waved lines, an outer discal denticulated

* Used by Walker in 1859 for a genus of Lepidoptera (see Catal. xix. p. 834).

line, a submarginal broad black zigzag line, and a marginal row of black linear spots: hindwing pale brownish-cinereous, with a paler interciliary line. Body and legs brownish-cinereous; legs with blackish bands.

Expanse $\frac{7}{10}$ inch.

CHLUMETIA EGENS (PLATE 151, FIG. 9).

?——— *egens*, Walker, MS. Brit. Mus. Cabinet.

Forewing purplish-grey; minutely black speckled; crossed by a black basal, subbasal, and a recurved medial sinuous line, an angulated discal denticulated line, and a slender sinuous submarginal line; a small black orbicular and reniform spot: hindwing cinereous-grey, dusky brown externally, with two black-speckled sinuous streaks above the anal angle, and a marginal row of black linear spots. Thorax purplish-grey, abdomen cinereous-grey; palpi cinereous-grey, black speckled; tarsi with black bands.

Expanse $\frac{6}{10}$ to $\frac{7}{10}$ inch.

Family PLUSIIDÆ.

Imago with the forewing smooth, shining, and generally with discal metallic spots: wings in repose forming a sloping roof. Flight diurnal and nocturnal. Larva with twelve or sixteen legs, half looped; attenuated anteriorly; with bristly spots on fleshy points. Feeds exposed on shrubs or herbaceous plants. Pupa in a silken cocoon, above ground.

Genus ABROSTOLA.

Abrostola, Ochsenheimer, Schmett. Eur. iv. p. 88 (1816); Samouelle, Ent. U. Comp. p. 252 (1819); Guénee, Noct. i. p. 320; Walker, Catal. Lep. Het. B. M. xii. p. 880.
Habrostola, Sodoffsky, Bull. Imp. Soc. Mosc. pt. vi. p. 15 (1837).

Forewing elongated, apex pointed, exterior margin oblique, convex, posterior margin recurved; cell long; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, third at about one-third from base of second, and fourth at one-half from base of third, fifth from end of the cell, curved upward and very slightly touching third at half-way between its base and the fourth; discocellular slightly concave, bent at upper and near lower end, radials from the angles, middle median from angle near end of the cell, lower at one-third before the end; submedian slightly recurved: hindwing short; cell broad, extending less than half the length; two subcostals from end of the cell; discocellular bent in the middle, radial from below the middle; two upper medians from end of the cell, lower at one-third before

the end; submedian and internal vein slightly curved. Body stout, thorax and abdomen crested; palpi rather long, second joint ascending to level of the vertex, very laxly squamose beneath, third joint long, cylindrical, half length of the second; antennæ simple; legs stout, pilose, spurs long. (*A. triplasia.*)

ABROSTOLA TRANSFIXA.

Abrostola transfixa, Walker, Catal. Lep. Het. B. M. xii. p. 884 (1857); xv. p. 1783 (1858).

Forewing dark greyish-brown, with some transverse basal costal darker brown curved lines, a subbasal waved duplex line with purplish centre, and a similar discal sinuous duplex line, followed by a submarginal zigzag slender black line and a marginal denticulated line tipt with white dots; an elongated outwardly oblique slender silvery-white lined orbicular mark, and a black lined reniform mark; from the orbicular mark an elongated pale silvery-white lined black-bordered streak extends to the discal line below the lower median vein: hindwing and abdomen cinereous-brown, marginal border darkest. Thorax, head, palpi, and legs dark greyish-brown.

Expanse $1\frac{2}{8}$ to $1\frac{3}{8}$ inch.

Genus PLUSIA.

Plusia, Hübner, Tentamen, p. 2 (1806); Ochsenh. Schmett. Eur. iv. p. 89 (1816); Guénee, Noct. ii. p. 324; Walker, Catal. Lep. Het. B. M. xii. p. 885.
Phytometra (part), Haworth.
Campæa (part), Lamarck.

Forewing elongated, costa slightly arched towards the tip, apex pointed and slightly falcate, exterior margin oblique, convex hindward, slightly denticulated, posterior margin recurved; cell long, extending two-thirds the length; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, third at one-fourth from base of second, fourth at one-third from base of third, fifth from end of the cell and slightly touching third close to its base: discocellular deeply concave in middle, bent near each end, radials from the angles; middle median from angle close to end of the cell, lower at two-fifths before the end; submedian recurved: hindwing short, exterior margin oblique, convex, slightly denticulated; cell extending two-fifths the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; middle median from angle close to end of the cell, lower at nearly one-half before the end; submedian and internal vein straight. Body stout, thorax and abdomen crested; palpi ascending, laxly clothed with hairy scales in front, second joint reaching to vertex, third joint minute; antennæ simple; legs rather long, fore tibiæ pilose, middle and hind tibiæ with long spurs. (*Type*, P. chrysitis.)

PLUSIA CHRYSITINA (Plate 152, Fig. 7).

Phalæna Noctua chrysitina, Martyn, Psyche, pl. 21 (1797).
Noctua aurifera, Hübner, Eur. Schmett. Noct. pl. 98, fig. 463 (1810).
Plusia aurifera, Treits. Schmett. Eur. iii. p. 168; Guénee, Noct. ii. p. 335; Walker, Catal. Lep. Het. B. M. xii. p. 892.

Forewing purplish ferruginous-brown, with a broad curved metallic golden-yellow angulated band extending from middle of the cell to the apex, which is indistinctly traversed across the disc by a zigzag darker fascia and a few short flecks; a very indistinct transverse slender pale golden-yellow zigzag subbasal and an antemedial line; a pale golden-yellow lined orbicular and reniform mark: hindwing pale brownish-cinereous, with cuprescent-brown marginal border. Thorax, head, palpi, and legs brownish-ferruginous, abdomen paler.

Expanse $1\frac{4}{10}$ to $1\ ^{6}$ inch.

Larva bluish-green, with a few short dorsal hairs; a prominent white lateral line, and slender dorsal lines. Pupa olive-green beneath, dorsally purplish-brown; stigmata black.

"Feeds on Coreopsis." (*Thwaites.*)

PLUSIA VERTICILLATA (Plate 152, Fig. 6).

Plusia verticillata, Guénee, Noct. ii. p. 344 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 923.

Dark cinereous-brown: forewing with a short transverse subbasal costal slender silvery-white streak, an oblique antemedial line, a less distinct discal angulated line, which is silvered only at its posterior end, and a slender black zigzag submarginal line; the borders of the basal streak, the medial interspace, and the exterior border darker coloured and glossy cupreous-ferruginous in some lights; the antemedial line is continued below the cell and joins a silvery-white ringlet spot with a very contiguous oval spot; a very indistinct silvery-white lined oblique orbicular mark, and a less distinct cuprescent reniform mark: hindwing and abdomen cinereous-brown, with a dusky brown border, crests of abdomen tipt with black and grey.

Expanse $1\frac{3}{10}$ to $1\frac{5}{10}$ inch.

Larva green, palest along the back; with indistinct longitudinal lateral and dorsal paler lines. Pupa green, with black dorsal streaks.

"Feeds on species of Ficus." (*Thwaites.*)

PLUSIA NIGRILUNA (Plate 152, Fig. 2, 2*a*, larva).

Plusia nigriluna, Walker, Catal. Lep. Het. B. M. xii. p. 931 (1857).

Forewing dark purplish-brown; with a transverse basal, and an antemedial silvery-speckled black-bordered slender waved line, a less defined recurved discal

zigzag line, a submarginal sinuous line, and a marginal lunular line; the basal, medial, and submarginal dark interspaces glossy cupreous-brown in some aspects: hindwing and abdomen brown; cilia paler, with darker brown spots. Thorax, head, palpi, and legs dark purplish-brown; tarsi with pale bands.

Expanse $1\frac{1}{4}$ inch.

Larva olive-green, darkest beneath; with a few short fine dorsal hairs; the segments spotted with black. Pupa green, with dorsal segmental brown streaks.

"Feeds on Acalypha." (*Thwaites.*)

PLUSIA SIGNATA (Plate 152, Fig. 4).

Noctua signata, Fabricius, Ent. Syst. iii. 2, p. 81 (1793).
Plusia signata, Guénee, Noct. ii. p. 345 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 926.
Plusia furcifera, Walker, Catal. Lep. Het. B. M. xii. p. 927 (1857).

Purplish greyish-brown: forewing crossed by a subbasal costal brown-bordered slender golden-yellow streak, an antemedial and a postmedial transverse oblique waved line, followed by a submarginal zigzag line, the intermediate medial area below the cell, and the outer border glossy cupreous-brown in some lights; three or four small black spots below base of the cell; reniform mark defined by indistinct black spots and a slender golden-yellow line; below the cell is a prominent silvery-white ringlet and a contiguous oval spot: hindwing and abdomen cinereous-brown. Crests of thorax and abdomen tipt with black and grey.

Expanse $1\frac{3}{10}$ inch.

PLUSIA OBTUSISIGNA (Plate 152, Fig. 1, 1*a*, larva).

Plusia obtusisigna, Walker, Catal. Lep. Het. B. M. xii. p. 930 (1857).

Forewing purplish-grey, numerously black speckled; a slender pale pinkish transverse subbasal short waved line, beneath which are some black streaks, an antemedial pale pinkish black-bordered waved line, and a postmedial recurved sinuous line, followed by a submarginal zigzag line, and a marginal lunular line; an indistinct white-lined oblique orbicular mark, reniform mark very indistinct; a silvery-white oblique angular streak extending from the orbicular mark between the lower median and submedian vein; discal area above the silvery-white streak, and also the dark borders of the transverse lines dark glossy purplish-brown in some lights: hindwing cinereous-brown, palest at the base. Thorax, head, palpi, and legs purplish-grey, brown speckled, tarsi with blackish bands; abdomen cinereous-brown.

Expanse $1\frac{1}{8}$ inch.

Larva green, with white longitudinal dorsal lines, subdorsal streaks, and lateral dots, and black dots on the fifth to last segment; a black streak on side of the head; front of head and fore legs with black dots, middle feet pale red. Pupa purple-brown.

PLUSIA LIMBIRENA (Plate 152, Fig. 5).

Plusia limbirena, Walker, Catal. Lep. Het. B. M. xii. p. 921 (1857).

Forewing purplish greyish-brown, black speckled, crossed by an indistinct inwardly-oblique subbasal and an antemedial waved slender silvery-grey black-bordered line, and a similar discal denticulated line, followed by a submarginal sinuous line, and a marginal lunular line with a purplish spot on the middle of the margin; orbicular mark indistinct, outwardly oblique, defined by a pale purple line, reniform mark less distinct; below the cell is a brilliant silvery-white ringlet spot and a connected lower oval spot; the darker parts of the wing cuprescent-brown in some lights: hindwing and abdomen brown, cinereous at the base; cilia cinereous. Thorax, head, and palpi purplish greyish-brown; tarsi black, with pale bands.

Expanse $1\frac{3}{8}$ inch.

PLUSIA OCHREATA (Plate 151, Fig. 4).

Plusia ochreata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 839 (1865).

Forewing purplish-ferruginous, with cinereous reflections; exterior border bright cupreous; crossed by an indistinct brown basal, subbasal, and a discal undulated line, and a submarginal zigzag line; a long oblique lanceolate silvery-bordered streak extending from the subcostal across the middle of the cell to the discal line: hindwing and abdomen purplish-cinereous. Thorax ferruginous; palpi and legs pale ferruginous-brown.

Expanse 1 inch.

PLUSIA AGRAMMA (Plate 152, Fig. 3, 3*a*, larva).

Plusia agramma, Guénee, Noct. ii. p. 327 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 926.
Plusia inchoata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 841 (1865).

Purpurescent cinereous-brown: forewing with a transverse waved subbasal pale line, an oblique medial, and an angulated discal line; an intermediate glossy cupreous-brown subbasal fascia below the cell, and along the exterior border, the latter traversed by a blackish zigzag line, the fasciæ appearing black in some aspects: hindwing and abdomen pale cinereous-brown.

Expanse $1\frac{4}{10}$ to $1\frac{6}{10}$ inch.

Larva green, with a few fine dorsal hairs; laterally black spotted, and with some short black pointed spines along the back, which are stoutest on the fifth, sixth, seventh, eighth, and twelfth segments; a prominent white subdorsal and a lateral waved line. Pupa olive-green, with blackish dorsal streaks.

"Feeds on Cucurbitaceæ." (*Thwaites.*)

PLUSIA PLACIDA (Plate 151, Fig. 10).

Forewing pale violaceous greyish-brown, with a pale greyish-white subbasal costal transverse streak, an inwardly oblique antemedial line from below the cell, and a postmedial oblique line; a recurved line extends below the cell from the outer to the inner line; the outer border of the wing is traversed by a waved blackish submarginal fascia; the lower area between the transverse lines from the recurved line, and also the borders of the submarginal fascia with æneseent reflections; an indistinct pale lined orbicular and reniform mark; a whitish marginal line extends from the apex to the middle of the posterior margin: hindwing greyish-brown. Body, palpi, and legs pale violaceous greyish-brown.

Expanse $1\frac{3}{10}$ inch.

PLUSIA LECTULA (Plate 146, Fig. 2).

Prodenia lectula, Walker, Catal. Lep. Het. B. M. xv. p. 1679 (1858), ♂.
Plusia Kalitura, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 110, fig. 24 (1874).

Forewing purplish greyish-brown; some short silvery purplish-white transverse streaks with blackish borders at the base of the costa and below base of the cell, a purplish-white streak from base of cell, and a more distinct silvery-white bordered lengthened lanceolate streak extending obliquely below the lower median vein, on which is a black dot at its upper basal end; reniform mark blackish, with a silvery-white lunule on its outer side; across the disc is a purple-brown zigzag lunular line with purple-white borders, beyond which is a submarginal row of blackish dentate spots bordered by a silvery-white sinuous line, and along the exterior margin are two slender purple-white anteciliary lines: hindwing pale cinereous, with broad brownish marginal border. Thorax and dorsal crests purplish-brown with purplish-white streaks; abdomen cinereous; head, palpi, and legs brown.

Expanse 1 to $1\frac{4}{10}$ inch.

PLUSIA DISPELLENS.

Plusia dispellens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 838 (1865).

"Female. Cinereous: forewings with a short black basal streak, and with two very broad cupreous-brown bands, which converge hindward; first band whitish-bordered, abbreviated hindward; second irregular, with some blackish dots on its exterior side, interrupted hindward; a whitish oblong patch between the bands, straightened in the middle, its fore part containing the reniform mark, its hind part forked; marginal dots black: hindwings pale cupreous-brown. Head, thorax, and underside brownish; palpi ascending, densely tufted to their tips; fore tibiæ densely tufted.

"Expanse 14 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

PLUSIA IMPULSA.

Plusia impulsa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 838 (1865).

"Female. Pale ochreous: forewings with a slight lilac tinge; three pale brownish-bordered oblique slightly curved lines; interior and exterior lines widely apart, space between them brightly gilded reddish-speckled, containing an oblique gilded silvery streak; a reddish apical spot; reniform mark very indistinct; marginal line pale, brown bordered: hindwings whitish-cinereous beneath, with two indistinct brownish lines. Abdomen and underside whitish-cinereous.

"Expanse 10 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

PLUSIA MUTANS.

Plusia mutans, Walker, Catal. Lep. Het. B. M. xxxiii. p. 839 (1865).

"Female. Cinereous: forewings cupreous tinged, glistening, with some undulating cinereous lines, of which a double one beyond the middle is more distinct than the others; submarginal line cinereous, zigzag; disc with an oblique lanceolate silvery streak, which is furcate at the base; marginal line pale cinereous, marginal lunules blackish. Head and thorax slightly tinged with ferruginous.

"Expanse 18 lines."

Genus PLUSIODONTA.

Plusiodonta, Guénee, Noct. ii. p. 359 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 937.
Deva, Walker, Catal. Lep. Het. B. M. xii. p. 962 (1857).

Forewing rather short, costa almost straight, pointed at the apex, exterior margin slightly angular in the middle, oblique hindward, posterior margin excavated from the end, lobed beyond the middle, the angle and lobe fringed; cell long, narrow, extending three-fifths the length; first subcostal emitted at one-third before end of the cell, second at one-sixth, trifid, fifth from end of the cell and touching third near its base; discocellular concave, radials from upper and lower end; middle median from close to end of the cell, lower at two-fifths before the end; submedian recurved: hindwing broad, exterior margin convex; two subcostals from end of the cell; discocellular concave, radial from close to lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body slender, thorax crested; palpi long, second joint pilose, thick, ascending to vertex, third joint linear, almost as long as the second; antennæ very minutely and sparsely pectinated; legs rather long, squamose, spurs long. (*P. conducens.*)

PLUSIODONTA CHALSYTOIDES (Plate 153, Fig. 1, 1*a*, ♂, larva).

Plusiodonta chalsytoides, Guénee, Noct. ii. p. 360 (1852).
Deva conducens, Walker, Catal. Lep. Het. B. M. xii. p. 963 (1857).
Plusia agens, Felder and Rogenh. Nov. Voy. Lep. iv. pl. 110, fig. 32 (1874).

Forewing dull ochreous olive-brown; base of the wing with an irregular purplish-cinereous patch, which is bordered by an oblique silvery-white streak from the costa, followed by some gilded yellow ferruginous-bordered lilacine-lined transverse irregular marks, an antemedial blackish lilacine-bordered sinuous line, and a very oblique discal angular blackish duplex line, which is also bent inward to the costa at the lower subcostal vein, the black portion of the line terminating at the lower median vein, and its lower end being ferruginous-brown, this line is also bordered by a lilacine-grey line; along the outer margin is an elongated upper and short lower gilded-yellow black-lined mark, and a marginal row of lilac-grey dentate lunules; an indistinct gilded-yellow lilac-grey bordered reniform mark: hindwing and abdomen dusky cinereous-brown; cilia cinereous. Thorax, head, palpi, and legs ochreous olive-brown.

Expanse, ♂ 1, ♀ $1\frac{1}{4}$ inch.

Larva with twelve legs; violet-black, with grey speckles and streaks; a purplish patch on eighth and twelfth segment; head reddish. Pupa narrow, purplish-black, enclosed within an elongated purplish-grey streaked cocoon.

"Feeds on Cocculus macrocarpus." (*Thwaites.*)

Genus BIRTHA.

Birtha, Walker, Catal. Lep. Het. B. M. xxxiii. p. 976 (1865).

"Male. Wings broad: forewings subfalcate, hardly acute; exterior border slightly rounded and oblique, second inferior vein as near to the third as the first, fourth not very remote from the third. Body moderately stout; palpi stout, curved, clothed with very short hairs, ascending above the vertex, third joint conical, not more than one-tenth the length of second; antennæ slightly pectinated, setose towards the tip; legs rather slender, hind femora and tibiæ with a long fringe, spurs long, slender."

BIRTHA INSULATA.

Birtha insulata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 976 (1865).

"Male. Fawn colour, pale cinereous fawn colour beneath: forewings with seven reddish-brown pale bordered spots; an antemedial band formed by the first, second, and third spots, of which the second is very much larger than the others, and extends to the interior border; fourth, fifth and sixth near the costa in front of a large cinereous patch which extends to the interior border, and is bordered with brown on the inner side, and is partly speckled with black; another cinereous patch bordered with

brown on the inner side, deeply notched on the outer side, including the seventh spot, which is costal; marginal points blackish, elongated: hindwings brownish, marginal line brown.

"Expanse 19 lines."

Family CALPIDÆ.

Imago with the forewing moderately broad, the posterior border excavated and dentate. Body not crested; antennæ acuminated, pectinated. Larva with sixteen feet, glabrous, smooth, cylindrical, slightly moniliform. Pupa amongst leaves or moss.

Genus ORÆSIA.

Oræsia, Guénee, Noct. ii. p. 362 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 942 (1857).

Forewing elongated, apex acuminated, exterior margin angular in the middle, oblique below the angle, posterior margin much excavated from the end, lobate beyond the middle; cell extending two-thirds the length, narrow; first subcostal emitted at about one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell and touching third at a short distance from its base; discocellular inwardly oblique, concave in the middle, bent close to each end, radials from the angles; middle median from angle close to end of the cell, lower at one-fourth before the end; submedian much curved beyond the base: hindwing short, broad, exterior margin very convex; cell extending to half the length; two subcostals from end of the cell; discocellular bent in the middle, radial from near lower end; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal vein straight. Body stout, smooth, abdomen keeled above; palpi porrect, thickly pilose, very broad laterally at the apex and pointed beneath, third joint very short, thick; antennæ broadly pectinated on one side only to near the tip in the male; legs stout, squamose, middle and hind spurs long. (*O. rectistria.*)

ORÆSIA EMARGINATA (Plate 153, Fig. 2, ♀, 2*a*, larva).

Noctua emarginata, Fabricius, Ent. Syst. iii. 2, p. 240 (1793).
Oræsia emarginata, Guénee, Noct. ii. p. 363 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 944.
Oræsia alliciens, Walker, Catal. Lep. Het. B. M. xii. 945 (1857), ♂.
Oræsia tentans, Walker, *id.* p. 945, ♀.

Forewings dark ferruginous, with two transverse, indistinct, pale purplish-grey bordered dark brown very oblique subbasal angular lines, two similar medial lines, and three discal lines, the three latter lines bent inward to the costa and their angles extending acutely towards the apex; beyond is a submarginal sinuous line; the basal line and the medial below the cell, and the outer discal line black, the intermediate

costal border between the inner and outer line, and also the exterior border below the middle, suffused with pale purple; an indistinct brown-lined reniform mark; the area below the middle of the cell, below the apex, and above the posterior angle glossy cupreous; a minute black dot at end of upper median vein; in the female is a blackish-grey bordered streak extending along the median vein to the outer discal line, and a purplish-white bordered streak below the lower median vein: hindwing pale ferruginous-brown, the base cinereous-brown. Head, palpi, and fore legs ochreous-yellow, the scales mostly tipt with red; thorax behind purplish-ferruginous, abdomen pale ferruginous-brown, tarsi brown.

Expanse $1\frac{3}{8}$ to $1\frac{5}{8}$ inch.

Larva half looped, with fourteen legs; dark violet-brown; with a longitudinal subdorsal row of scarlet and yellow spots, and a sublateral row of white dots. Pupa dark reddish-brown.

ORÆSIA ARGYROSIGNA (Plate 153, Fig. 4, ♂).

Male: forewing dark purplish violet-brown, with numerous short transverse blackish waved strigæ, some blackish transverse subbasal waved streaks below the cell, an oblique medial fascia extending from end of the cell to the middle lobe on the posterior margin, a transverse discal duplex black line, which is bent acutely inward to the costa before the apex, followed by a submarginal sinuous black line; the medial fascia and the area above posterior angle glossy cupreous in some lights; median vein and its middle branch black; reniform mark large, broad, defined by a black line; a silvery-white oval spot before the apex: hindwing dark brown; cilia cinereous-brown. Thorax, head, palpi, and legs purplish violet-brown; front of thorax and streaks on the head purple-red; abdomen above sepia-brown.

Expanse $1\frac{7}{8}$ inch.

Genus ARSACIA.

Arsacia, Walker, Catal. Lep. Het. B. M. xxxiv. p. 126 (1865).

Male. Wings small: forewing elongated, costa slightly arched before the end, not acute at the apex, exterior margin oblique, slightly convex, posterior margin lobate towards the base, the angle and lobe fringed; cell long, fusiform, extending two-thirds the length; first subcostal emitted at one-fourth before end of the cell, second at one-eighth, quadrifid, the third at one-half from base of the second, the fourth at one-half from base of third, the fifth being emitted from below the second at one-third from its base; discocellular slightly concave, upper radial from end of the cell, lower from angle close to lower end of the discocellular; middle median at about one-eighth before end of the cell, lower at two-fifths before the end; submedian slightly recurved: hindwing rather long, apex very convex, exterior margin very

oblique; cell extending two-thirds the length, narrow; two subcostals from end of the cell; discocellular oblique, radial from lower end; middle median from one-fifth before end of the cell, lower at two-fifths; submedian and internal vein straight. Body rather slender, abdomen long; palpi porrect, broad, thickly clothed beneath, third joint very short, thick; antennæ setose; legs long, slender, smooth, spurs long.

ARSACIA SATURALIS (Plate 152, Fig. 8).

Arsacia saturalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1260 (1865).

Forewing deep purplish-ochreous; with a very oblique whitish line extending from the apex to middle of the posterior margin; the inner area from the subcostal vein to the white line being dark olive-brown with a black streak at its apical end; a marginal row of minute dentate black points: hindwing and abdomen pale cinereous-brown. Thorax, head, and palpi purplish-ochreous; legs cinereous-brown; fore tibiæ ochreous above; tarsi with brown bands.

Expanse $\frac{3}{4}$ inch.

Genus CALPE.

Calpe, Treitschke, Schmett. Eur. v. pt. 2, p. 169 (1825); Guén. Noct. ii. p. 373; Walker, Catal. Lep. Het. B. M. xii. p. 958.

Calyptra,* Ochsenheimer, Schmett. Eur. iv. p. 78 (1816).

Male: forewing elongated, rather broad, costa slightly arched, acuminated and almost hooked at the tip, exterior margin oblique, very convex, posterior margin deeply excavated from the angle and lobed beyond the middle; cell long, extending two-thirds the length; first subcostal emitted at one-third before end of the cell, second at one-eighth, trifid, fifth from end of the cell and joined by a short spur to base of the third; discocellular inwardly oblique, slightly concave in the middle, bent near each end, radials from the angles; middle median from angle close to end of the cell, lower at one-third; submedian much curved from the base: hindwing short, broad, exterior margin oblique, convex in the middle; cell extending to half the length; two subcostals from end of the cell; discocellular bent in the middle, radial from near lower end; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein straight. Body stout, abdomen smooth; palpi porrect, projecting half beyond the head, laterally broad, thickly tufted beneath with long hairy scales, third joint minute, hidden in front; antennæ bipectinated; legs stout, compactly pilose, middle and hind tibiæ with long spurs. (*Type*, C. Thalictri.)

CALPE MINUTICORNIS (Plate 153, Fig. 3, 3*a*, larva).

Calpe minuticornis, Guénee, Noct. ii. p. 374 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 959; Moore, P. Z. S. 1883, p. 19.

Forewing glossy lilacine cinereous-brown; numerously covered with very slender

* Previously used in Mollusca.

cinereous-white wavy strigæ, which are more or less continued across the wing; an oblique ochreous-brown line with white outer border extending from the apex to middle of the posterior margin before the lobe; across the wing are also four or five oblique brownish fasciæ; and a submarginal and marginal row of black points: hindwing and abdomen cinereous-brown, the outer border darkest. Thorax, head, palpi, and fore legs cinereous-brown, with whitish-cinereous strigæ.

Expanse $1\frac{3}{4}$ inch.

Larva olive-grey; with a subdorsal row of black-bordered yellow spots and dots, and a sublateral row of small yellow spots; a sublateral pale pinkish-bordered black line enclosing the spots from fifth segment; stigmata black; head ochreous-yellow with a black cheek-spot; legs pale pink. Pupa dark purplish-red.

"Feeds on Cocculus macrocarpus, &c." (*Thwaites.*)

Family HEMICERIDÆ.

Wings shining; posterior border of forewings often excavated. Body smooth. Larva with sixteen feet, thick, notodontiform. Pupa subterranean. (*Guénee.*)

Genus WESTERMANNIA.

Westermannia, Hübner, Zuträge, Samml. Exot. Sch. ii. 23, 162, fig. 323-4 (1823); Verz. bek. Schmett. p. 250 (1818-25); Walker, Catal. Lep. Het. B. M. xii. p. 975.
Plusiodes, Guénee, Noct. ii. p. 386 (1852).

Male: forewing elongated, triangular, glossy, pointed at the apex, exterior margin very oblique, slightly convex, posterior margin convex towards the base; first subcostal emitted at nearly one-half before end of the cell, second at one-sixth, trifid, fifth from end of the cell and touching third close to its base; cell extending three-fifths the length; discocellular bent near each end, concave in the middle, radials from the angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian much curved: hindwing short, apex and exterior margin very convex; two subcostals from end of the cell; discocellular very obliquely concave, radial from close to lower end; two upper medians from extended end of the cell; lower at one-fourth before the end; submedian and internal vein straight. Body moderately stout, thorax stout, smoothly clothed, abdomen attenuated towards the tip; palpi long, slender, ascending to vertex, second joint curved, third joint cylindrical, nearly as long as the second; antennæ slender, setose; legs squamose, tibiæ moderately stout, middle and hind tibiæ spurred.

WESTERMANNIA SUPERBA (Plate 154, Fig. 1, 1*a*, larva).

Westermannia superba, Hübner, Zuträge Samml. Exot. Schmett. ii. 23, 162, fig. 323-4 (1823); Verz. bek. Schmett. p. 250; Walker, Catal. Lep. Het. B. M. xii. p. 975.

Plusiodes Westermannii, Guénee, Noct. ii. p. 386, pl. 13, fig. 4 (1852).

Male and female: forewing glossy cupreseent ochreous-brown, the basal area from the costal edge, and irregularly across the middle of the disc to the submedian vein, suffused with dull purpurescent silvery-white, enclosed within this area is an oblique medial transverse cupreseent ochreous-brown patch, which is traversed by the white discocellular and median vein, and also a minute black spot beyond lower end of the cell; posterior border below the submedian vein pale brownish-ochreous; an indistinct blackish sinuous submarginal streak, and minute marginal dots: hindwing pale cupreseent cinereous-brown, darker externally; cilia edged with whitish-cinereous. Thorax pale brownish-ochreous; head, palpi, and legs white; abdomen cinereous-brown.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{5}{10}$ inch.

Larva pale olive-green, numerously dotted with yellow; a yellow dorsal line on each segment, a small red streak on each cheek. Pupa reddish, partly pulverulescent-white.

"Feeds on Terminalia." (*Thwaites.*)

Family HYBLÆIDÆ.

Forewing generally rather broad, not excavated or angular. Thorax squamous. Larva with sixteen feet, thick, attenuated at the ends; with a few short silky hairs. Lives in a rolled leaf, feeding from the open ends. Pupa enclosed amongst leaves.

Genus HYBLÆA.

Hyblæa, Fabricius, Ent. Syst. iii. 2, p. 127 (1793); Guén. Noct. ii. p. 390; Walker, Catal. Lep. Het. B. M. xii. p. 979.

Euschesis (part), Hübner, Verz. bek. Schmett. p. 221 (1818-25).

Forewing moderately short, broad, apex hardly pointed, exterior margin slightly convex and oblique, posterior margin convexly angular towards the base; each subcostal branch free, first emitted at three-fifths before end of the cell, second at one-fifth, third and fourth from angles close to end of the cell, and fifth from the end of the cell; discocellular inwardly oblique, bent near each end, concave in the middle, radials from upper and lower angles; middle median at one-ninth before end of the cell, lower at one-third; submedian slightly curved; a recurved internal vein which is well separated from the submedian and extends to half length of the margin: hindwing short, apex convex, exterior margin very oblique, convex; cell extending

to half the length; first subcostal emitted before end of the cell; discocellular outwardly oblique, radial from below the middle; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal veins widely separated, recurved. Body stout; thorax very robust, thickly clothed, smooth; head small, pointed in front; palpi porrect, closely applied at the tip and projecting in front of the head like a rostrum, compactly clothed with lengthened scales, the joints of equal length; antennæ setaceous; legs stout, middle and hind tibiæ thickly clothed, spurs stout. (*H. puera.*)

HYBLÆA PUERA (Plate 154, Fig. 2, 2*a*, larva).

Phalæna Noctua Puera, Cramer, Pap. Exot. ii. pl. 103, fig. D, E (1779).
Hyblæa Puera, Guénee, Noct. ii. p. 390; Walker, Catal. Lep. Het. B. M. xii. p. 979.
Noctua saga, Fabr. Mant. Ins. ii. p. 137 (1787).
Hyblæa saga, Fabr. Ent. Syst. iii. 2, p. 128 (1793). Naturf. p. 201, pl. 4, fig. 10, 11.
Noctua unxia, Hübner, Eur. Schmett. Noct. fig. 513 (1810).
Euschesis unxia, Hübner, Verz. bek. Schmett. p. 221.
Heliothis apricans, Boisduval, Faun. Ent. Mad. et Maur. Lep. p. 98, pl. 15, f. 7 (1834).

Forewing dark purplish greyish-brown, more or less indistinctly flecked with minute black transverse strigæ; a darker purple-brown oblique subbasal fascia, a broad waved discal interrupted fascia, and a similar short fascia from the apex; these fasciæ are more or less indistinct in the male, and in the female are more or less interspaced obliquely across the middle and externally from the costa to posterior angle with longitudinally disposed olive-yellow scales; an indistinct blackish reniform spot is also sometimes present: hindwing cupreous-black, with a short discal scarlet-bordered yellow angulated lobular band, and a short similar coloured band from the anal angle; cilia pale purple-brown. Body above purplish greyish-brown, abdomen with slender yellow segmental bands; palpi, and thorax beneath, and legs yellow, hind tibiæ with a pale scarlet stripe.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{5}{10}$ inch.

Larva with a few short silky hairs; dark purplish-grey above, olive-green below; with dorsal and lateral white lines, a subdorsal row of minute white dots and rings; a row of black dots on lateral line; head and second segment, and front legs black. Pupa dark purple-brown.

"Feeds on Bignoniaceæ." (*Thwaites.*)

HYBLÆA CONSTELLATA (Plate 154, Fig. 3, 3*a*, ♂ ♀).

Hyblæa constellata, Guénee, Noct. ii. p. 391 (1852); Walker, Catal. Lep. Het. B. M. xii. p. 980.

Male: forewing dark olive-brown; with an indistinct transverse oblique discal and a submarginal brown fascia, a few olive-yellow longitudinal scales disposed along

the inner upper and lower ends of the border of the discal fascia, and some indistinct black spots disposed transversely between its outer border and the submarginal fascia: hindwing cupreous-black, with two small golden-yellow upper discal spots and two lower streaks; cilia cupreseent-cinereous. Body dark olive-brown above; abdomen beneath scarlet-red; palpi and thorax beneath, and legs ochreous-yellow; middle and hind tibiæ with a pale scarlet streak. Female: forewing dark olivaceous sepia-brown, with a few very prominent olive-yellow scales at the costal end of the inner discal fascia, and a broad oblique patch of olive-yellow scales below the cell, and also an outwardly oblique series from the costa before the apex: hindwing and body as in male.

Expanse $1\frac{1}{2}$ inch.

Genus MACEDA.

Maceda, Walker, Catal. Lep. Het. B. M. xiii. p. 1440 (1857).
Calduba, Walker, *id.* xv. p. 1815 (1858).

Forewing moderately elongated, rather broad, almost rectangular, exterior margin slightly oblique; cell fusiform, extending three-fifths the length; along the upper end of the cell, in the male, is a semi-transparent vitreous streak, which is scabrous both on the upper and underside of the wing; first subcostal emitted at one-half before end of the cell, curved upward from the base, second at one-fourth before the end, trifid, third at one-fourth from base of second, and fourth at one-half from base of third, fifth from end of the cell and joined by a short spur to the base of third; discocellular short, bent near lower end, radials from upper end and lower angle; middle median at one-sixth before end of the cell, lower at one-third; submedian curved: hindwing short, apex and exterior margin convex; cell broad, extending to half the length; two subcostals from end of the cell; discocellular obliquely concave, radial from the extreme lower end; two upper medians from a footstalk one-fourth beyond end of the cell, lower close to end of the cell; submedian and internal vein slightly curved, widely separated from the median. Body moderately stout; thorax robust, smooth, abdomen tapering to a point at apex; palpi slender, ascending to vertex, laxly squamose beneath, third joint short, conical; antennæ finely pectinated in male, setose in female; legs squamose, middle and hind tibiæ with very long spurs.

MACEDA MANSUETA (Plate 154, Fig. 4, 5, ♂ ♀).

Maceda mansueta, Walker, Catal. Lep. Het. B. M. xii. p. 1141 (1857), ♂; *id.* xxxiii. p. 924, ♀.
Calduba obtenta, Walker, *id.* xv. p. 1815 (1858), ♂.

Forewing purplish olivescent ochreous-brown; with a transverse outwardly oblique straight pale ochreous antemedial line, and an irregular sinuous postmedial

line, followed by a slender blackish sinuous submarginal line; the medial area between the two transverse lines either entirely dark violet-brown or only on the upper half of the area, in both sexes; in some females the two transverse lines are less defined and have only a slightly darker slender border, with the intermediate area of the same colour as the outer parts; both sexes have a small black spot at upper end of the cell, and a slight black streak at base of the posterior margin: hindwing dusky violet-brown, with the discal area hyaline-white; cilia and fringe of abdominal margin white. Thorax, head, palpi, and bands on tibiæ and tarsi olive-brown; body and legs beneath white.

Expanse $1\frac{1}{8}$ to $1\frac{3}{8}$ inch.

Family GONOPTERIDÆ.

Imago with the forewings angulated and indented on the exterior border; thorax with raised collar; abdomen flattened and truncated in both sexes. (*Stainton.*)

Larva with sixteen legs, smooth. Feeds exposed on trees. Pupa enclosed in a slight cocoon amongst leaves.

Genus COSMOPHILA.

Cosmophila, Boisduval, Faun. Ent. Mad. Lep. p. 94 (1834); Guén. Noct. ii. p. 394 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 985.

Forewing elongate, moderately broad, costa slightly arched towards the end, apex acute, exterior margin slightly oblique, and angular in the middle, posterior margin convex towards the base; cell long, extending three-fifths the length; first subcostal emitted at one-third before end of the cell, second at one-sixth, third at one-fourth from base of second, fourth at two-thirds from base of third, fifth from end of the cell and slightly touching the third close to its base; discocellular concave, bent near each end, radials from the angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian recurved: hindwing short, broad; cell extending to half the length; two subcostals from end of the cell; discocellular slightly concave, radial from below the middle; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body moderately stout, abdomen carinated above; palpi ascending, second joint clothed with long lax scales, stout, reaching to the vertex, third joint two-thirds the length of second, cylindrical and acuminate at the tip; antennæ minutely pectinated; legs slender, squamose, middle and hind tibiæ with very long spurs. (*C. xanthindyma.*)

COSMOPHILA XANTHYNDIMA (PLATE 155, FIG. 1, 1 *a*, *b*, ♂ ♀, larva).

Cosmophila xanthyndima, Boisduval, Faun. Ent. Madag. Bour. et Maur. Lep. p. 94, pl. 13, fig. 7, ♂ (1834); Guénee, Noct. ii. p. 396; Walker, Catal. Lep. Het. B. M. xiii. p. 987, ♂.

Cosmophila indica, Guénee, Noct. ii. p. 396, ♀ (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 986.

Cirrœdia variolosa, Walker, Catal. Lep. Het. B. M. xi. p. 750 (1857), ♂.

Cirrœdia edentata, Walker, *id.* xi. p. 750 (1857), ♀.

Male: forewing ochreous-yellow, speckled with ochreous-red from the base to the middle, the outer half being pale purplish brownish-ochreous; two short subbasal costal angular ochreous-brown lines, an outwardly oblique angulated antemedial line, an inwardly oblique medial line, followed by an upper discal slender line, and a submarginal dusky brown angulated fascia; orbicular mark small, defined by an oval brown ring, reniform mark large, dusky lilacine-brown, with a dusky brown spot below it: hindwing pale brownish-ochreous. Thorax, head, and palpi ochreous, speckled with ochreous-red; legs whitish, speckled with purplish-ochreous.

Female: forewing more uniformly paler ochreous, the transverse lines and the basal speckles as in male, but less distinct; orbicular and reniform mark paler: hindwing paler ochreous.

Expanse, ♂ 1, ♀ $1\frac{1}{4}$ inch.

Larva with fourteen legs, semi-looped; grass-green, with a dorsal and lateral line of minute white dots; middle and hind claspers reddish. Pupa purplish-red.

" Feeds on *Hibiscus*." (*Dr. Thwaites.*)

Genus GONITIS.

Gonitis, Guénee, Noct. ii. p. 403 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 997.

Forewing elongate, moderately broad, costa almost straight, apex acute, exterior margin acutely angular in the middle; cell long; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, third at one-fourth from base of second, and fourth at three-fourths from base of third, fifth from end of the cell and slightly touching the third near its base; discocellular inwardly oblique, concave, radials from close to each end; middle median from angle close to end of the cell, lower at one-third; submedian slightly curved: hindwing short, broad, exterior margin almost angular in the middle; two subcostals from end of the cell; discocellular slightly bent in the middle, radial from below the middle; two upper medians from end of the cell, lower at one-third; submedian and internal vein slightly curved. Body stout; palpi ascending above the head, second joint squamose, third joint long, acuminate at tip; antennæ ciliated; legs rather thick, compactly clothed with long scales, spurs very long. (*G. mesogona.*)

GONITIS FULVIDA (Plate 155, Fig. 3, ♂, 3*a*, larva).

Anomis fulvida, Guénee, Noct. ii. p. 397 (1852), ♀.
Gonitis fulvida, Moore, P. Z. S. 1883, p. 19.
Gonitis combinans, Walker, Catal. Lep. Het. B. M. xiii. p. 1001 (1857), ♀.
Gonitis guttanivis, Walker, *id.* p. 1003 (1857), ♂.

Male: forewing ochreous-yellow, covered with numerous ochreous-red scales; crossed by a purple-black oblique waved antemedial line, and a medial line, the latter bent outward below the reniform mark along the middle median, and is thence zigzag upward to the costa; an indistinct dusky zigzag submarginal fascia; the veins outward from the medial line speckled with purple-black and grey; a prominent white orbicular spot, and an oval white spot bordering the lower end of the dusky grey reniform mark: hindwing pale ochreous-brown. Cilia edged with white. Thorax and head reddish-ochreous; abdomen, palpi, and legs ochreous-brown.

Female paler: forewing with the transverse lines more slender and less distinct, the antemedial and lower part of the medial line angular; orbicular white spot very minute; reniform indistinct and not white at lower end; veins externally less distinctly speckled.

Expanse $1\frac{1}{2}$ to $1\frac{3}{4}$ inch.

Larva with a few short fine black hairs; black above, olive-yellow beneath; with a subdorsal row of short transverse yellow streaks, above which is a row of minute yellow spots; stigmata black; head and legs pale reddish. Pupa dark purple-brown.

GONITIS INVOLUTA (Plate 153, Fig. 7).

Gonitis involuta, Walker, Catal. Lep. Het. B. M. xiii. p. 1003 (1857).
Gonitis basalis, Walker, *id.* p. 1004 (1857), ♀.
Tiridata colligata, Walker, *id.* xxxiii. p. 870 (1865).

Forewing cinereous ochreous-brown; numerously covered with uniformly disposed short transverse cinereous strigæ and blackish speckles; a very indistinct transverse basal curved pale-bordered brown line, an angulated medial line, and a postmedial line, which is curved hindward, and bent outward from lower end of the cell, and thence waved upward to the costa; a very indistinct submarginal brown zigzag fascia; a white dot at base of the cell; a brown-bordered white orbicular dot, and a more or less defined black-spotted brown reniform mark: hindwing and abdomen paler cinereous ochreous-brown. Thorax, head, palpi, and legs cinereous ochreous-brown.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{3}{8}$ inch.

GONITIS MESOGONA (Plate 153, Fig. 8).

Gonitis mesogona, Walker, Catal. Lep. Het. B. M. xiii. p. 1002 (1857).

Male and female. Olivescent cinereous-brown: forewing numerously covered with short transverse slender waved cinereous strigæ, and with a few black speckles, which are mostly disposed upon the outer border; a transverse short basal cinereous-bordered line, an antemedial inwardly-oblique line, which is straight hindward and bent inward in crossing the cell to the costa; a similar postmedial line, which is straight hindward and bent outward at the middle median and waved upward to the costa; beyond which is a less distinct zigzag submarginal fascia; some small indistinct black-speckled spots below base of the cell; reniform mark represented by two black spots: hindwing and abdomen cinereous-brown. Thorax and head olivescent cinereous-brown, with cinereous speckles; palpi and legs speckled with purplish-ochreous; a slender collar on front of the thorax, and edges of the tegulæ cinereous.

Expanse $1\frac{3}{8}$ to $1\frac{5}{8}$ inch.

Genus RUSICADA.

Rusicada, Walker, Catal. Lep. Het. B. M. xiii. p. 1006 (1857).

Male: forewing longer and narrower than in typical Gonitis, the exterior margin more oblique and less angulated in the middle: hindwing also longer and narrower. Venation similar. Palpi somewhat more slender; legs much more slender; antennæ minutely ciliated.

RUSICADA NIGRITARSIS (Plate 155, Fig. 2, 2 *a*, *b*, *c*, *d*, ♂ ♀, larva).

Rusicada nigritarsis, Walker, Catal. Lep. Het. B. M. xiii. p. 1006 (1857), ♂; Moore, P. Z. S. 1883, p. 20.

Gonitis albitibia, Walker, *l.c.* p. 1001, ♀.

Male: forewing dark purplish reddish-ochreous, palest and blotchy on the posterior border; crossed by a darker oblique zigzag antemedial and a medial line, the latter bent below the reniform mark, and is thence sinuous upward to the costa; a less distinct submarginal dark zigzag slender fascia; an indistinct minute white orbicular spot and grey-lobed reniform mark; cilia purplish-brown: hindwing dusky brown; cilia edged with cinereous-white. Female darker coloured, marked as in male. Thorax, head, palpi, and legs above dark reddish-ochreous; tarsi with pale bands, tibial tuft in female white externally.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{7}{10}$ inch.

Larva olive-green, or olive-grey, with dorsal and lateral yellow or whitish longitudinal lines; each segment dotted with black. Pupa dark purple-brown.

"Feeds on *Waltheria indica*, &c." (*Thwaites.*)

RUSICADA ICONICA.

Anomis iconica, Walker, Catal. Lep. Het. B. M. xiii. p. 992 (1857), ♀.

"Female. Reddish fawn colour, whitish beneath: forewings slightly tinged with shining purple, with three indistinct diffuse undulating blackish bands, and with a row of submarginal blackish dots; reniform spot indicated by a blackish mark; tips somewhat rounded; exterior border nearly straight, hardly oblique: hindwing pale cinereous, with an æneous tinge. Abdomen pale cinereous, and with a metallic tinge.

"Expanse 16 lines."

Genus THALATTA.

Thalatta, Walker, Catal. Lep. Het. B. M. xiii. p. 996 (1857).

Forewing short, moderately broad, almost straight in front, acute at the apex, exterior margin angular in the middle; cell narrow, extending more than half the length; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell and joined to third by a short spur near its base; discocellular slightly concave, bent at each end, radials from the angles; middle median from close to end of the cell, lower at two-fifths before the end; submedian curved at the base: hindwing short, broad, convex externally; two subcostals from end of the cell; discocellular very slender, radial from near lower end; two upper medians from end of the cell, lower at two-fifths; submedian and internal vein straight. Body moderately slender, palpi long, slender, obliquely ascending, second joint reaching level of the eyes, laxly squamose, third joint long, more than half length of second, lanceolate; antennæ minutely pectinated; femora and tibiæ densely clothed with long hairs. (*Type*, T. precedens.)

THALATTA MODESTA (Plate 153, Fig. 5).

Thalatta modesta, Moore, P. Z. S. 1883, p. 22.

Forewing purple-brown; crossed by a postmedial indistinct pale-bordered brown line: hindwing cinereous-brown. Body, palpi, and legs brown.

Expanse $1\frac{2}{10}$ inch.

THALATTA ALBIORBIS (Plate 153, Fig. 6).

Thalatta albiorbis, Moore, P. Z. S. 1883, p. 22.

Forewing dark purplish-brown; crossed by a postmedial indistinct outwardly oblique waved brown line; a prominent pure white orbicular spot: hindwing greyish-brown; cilia white. Underside purplish greyish-brown: hindwing brown speckled. Palpi and legs dark purple-brown.

Expanse $1\frac{2}{10}$ inch.

Genus FALANA.

Falana, Moore, Desc. Lep. Coll. Atk. p. 153; Asiat. Soc. Bengal (1882).

Forewing somewhat short, broad anteriorly, costa straight, apex pointed; exterior margin very irregularly scalloped, angular in the middle; first subcostal branch emitted at nearly one-half before end of the cell, second from close to the end, trifid, third from very near base of second, fourth from near end of the third and terminating at the apex, fifth from end of the cell and touching third near its base; discocellular slightly bent near each end, slightly concave in the middle, radials from the angles; upper and middle median branches from angles at end of the cell, lower at nearly one-half before its end; submedian nearly straight: hindwing somewhat small, short and narrow; exterior margin slightly uneven; costal vein nearly straight; two subcostal branches from end of the cell; discocellular slender, straight, inwardly oblique, radial from near its lower end; cell short; two upper median branches from beyond end of the cell, lower from close before its end; submedian and internal vein straight. Body moderate, abdomen extending beyond hindwings; palpi ascending, second joint squamose, extending to vertex, third joint of nearly equal length, slender; legs long; tibiæ tufted, hind femora tufted beneath; antennæ setose.

FALANA SORDIDA (Plate 155, Fig. 4).

Falana sordida, Moore, Desc. Lep. Coll. Atk. p. 154 (1882).

Dull brownish-ochreous: forewing with an indistinct basal and medial transverse darker band, the latter inwardly bordered by a slight black sinuous line and outwardly by a less distinct duplex sinuous line, the latter ending on the costa in a pale streak; the discal and marginal area black speckled, and with a discal series of indistinct black-speckled spots, which are most prominent at the apical end; an indistinct black orbicular dot and an elongated pale centred black reniform streak: hindwing ochreous-brown; cilia ochreous. Body ochreous; palpi and legs above ochreous-brown, tuft on hind femora white.

Expanse $1\frac{3}{12}$ to $1\frac{5}{12}$ inch.

Family OPHIUSIDÆ.

Toxocampidæ, Guén. Noct. ii. p. 419 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1022.

Imago of moderate size; thorax smooth, with raised collar; abdomen smooth, flattened. (*Stainton.*)

Larva smooth, elongate, attenuated at the ends, with sixteen legs, the first two pairs of ventrals rather short. Pupa enclosed amongst portions of leaves, moss, &c.

Genus OPHIUSA.

Ophiusa, Ochsenheimer, Schmett. Eur. iv. p. 93 (1816); Hübner (spelt Ophiussa), Verz. bek. Schmett. p. 267 (1818-25); Stephens, Ill. Brit. Ins. Haust. iii. p. 125 (1829); Catal. Brit. Lep. B. M. p. 152 (1850).

Hemachra (part), Sodoffsky, Bull. Soc. Imp. Mosc. pt. vi. p. 15 (1837).

Toxocampa, Guénee, Ann. Soc. Ent. Fr. x. p. 75 (1841); Noct. ii. p. 423 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1027.

Wings rather broad and short: forewing triangular, apex somewhat pointed, exterior margin hardly oblique, slightly convex; cell extending a little beyond half the wing; first subcostal emitted beyond one-half before end of the cell, second at one-fifth, trifid, third at one-sixth from base of second, and fourth at four-fifths from base of third, fifth from end of the cell and very slightly touching third near its base; discocellular outwardly oblique, concave, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at two-fifths before the end; submedian curved from the base: hindwing ample, broad, exterior margin convex, waved; cell extending two-fifths the length; two subcostals from end of the cell; discocellular bent in the middle, radial from below the middle; two upper medians on a short footstalk beyond the extreme end of the cell, lower at one-third; submedian and internal vein slightly recurved. Body rather slender, thorax laxly clothed; palpi stout, pilose, obliquely ascending, second joint reaching level of the eyes, third joint short, thick, conical; antennæ finely serrate-pectinate, in male; legs rather stout, compactly pilose, spurs long. (*Type*, O. lusoria.)

OPHIUSA METASPILA (Plate 154, Fig. 6).

Toxocampa metaspila, Walker, Catal. Lep. Het. B. M. xiii. p. 1032 (1857).

Ophiusa pallidilinea, Walker, *id.* xv. p. 1832 (1858).

Greyish-brown: forewing with several very indistinct transverse undulating blackish-speckled lines, a pale ochreous straight discal line containing a white dot on the veins, bordering which on the outer side are some dull ferruginous streaks; a marginal row of black dots; a minute white orbicular spot: hindwing dusky brown, with a narrow pale ochreous-brown discal transverse band; cilia pale ochreous-brown. Body greyish-brown; thorax with a dark brown collar in front; head, palpi, and legs above dark brown.

Expanse $1\frac{5}{8}$ inch.

OPHIUSA QUINQUELINEA.

Toxocampa quinquelinea, Walker, Catal. Lep. Het. B. M. xxxiii. p. 872 (1865).

"Female. Fawn-colour, pale cinereous-testaceous beneath: forewings with five indistinct reddish-brown denticulated lines, of which the fourth and fifth are diffusedly

connected in the forepart of the disc; exterior border reddish-brown; orbicular and reniform marks obsolete: hindwings pale fawn-colour, with a broad darker border; fringe pale. Wings beneath with a large dark brown discal spot and with a paler brown exterior line. Third joint of the palpi as long as the second.

"Expanse 16 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

OPHIUSA SEXLINEA.

Toxocampa sexlinea, Walker, Catal. Lep. Het. B. M. xxxiii. p. 872 (1865).

"Female. Cinereous fawn-colour, paler beneath: forewings with six slender indistinct brownish nearly upright lines; first almost obsolete, second, third, and fourth slightly undulating, fifth almost straight, sixth denticulated; reniform mark blackish, narrow, forming a truncated lunule, between the third and fourth lines; orbicular forming a whitish dot containing a black point: hindwings without lines; underside with a brown discal lunule. Head and forepart of thorax brown.

"Expanse 15 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

OPHIUSA DORSIGERA.

Toxocampa dorsigera, Walker, Catal. Lep. Het. B. M. xxxiii. p. 873 (1865).

"Female. Cinereous-brown, paler beneath: forewings transversely cinereous-streaked; submarginal line cinereous, nearly straight; a more exterior row of black points, of which the largest is near the interior angle; orbicular mark forming a whitish point; reniform deep black, emitting a streak towards the costa and accompanied on the outer side by an elongated dot: hindwings dingy cinereous, with a broad diffuse brown border; fringe pale cinereous. Palpi slightly ascending, extending rather beyond the head; second joint broad, third elongate-conical, one-fourth length of the second. Thorax deep black in front; legs stout, femora and tibiæ fringed.

"Expanse 28 lines."

Family HOMOPTERIDÆ.

Imago with the forewings moderately broad and triangular; abdomen mostly with crests. Larva with sixteen feet, the first two pairs of ventrals aborted.

Genus PANDESMA.

Pandesma, Guénee, Noct. ii. p. 438 (1852).
Thria, Walker, Catal. Lep. Het. B. M. xiii. p. 1111 (1857).
Cerbia, Walker, *id.* xiv. p. 1365 (1858).

Forewing somewhat elongate, moderately broad, costa almost straight, apex obtuse, exterior margin slightly oblique and scalloped; cell narrow, extending to half the length; first subcostal emitted at one-third before end of the cell, second at one-sixth, trifid, third at one-sixth from base of second, and fourth at one-third from base of third, fifth from end of the cell, and slightly touching third near its base; discocellular slightly concave, bent close to each end, radials from the angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian much curved from the base: hindwing short, broad, almost quadrate, exterior margin almost angular in the middle, slightly scalloped; cell short, extending one-third the length; two subcostals from end of the cell; discocellular very concave, radial from near lower end; two upper medians from extended lower end of the cell, lower at one-fourth before the end; submedian and internal vein slightly curved. Body very stout; palpi obliquely ascending, first joint laxly clothed, second joint long, robust, compactly squamose, reaching to middle of the eyes, third joint one-third the length of the second, slightly clavate at the tip; antennæ slightly pectinated in male, simple in female; legs short, pilose, all the tibiæ densely tufted, middle and hind tibiæ with long spurs. (*Type*, P. Quenavadi.)

PANDESMA QUENAVADI (Plate 156, Fig. 1, ♂).

Pandesma Quenavadi, Guénee, Noct. ii. p. 438, pl. 15, fig. 3 (1852).

Forewing pale purplish-cinereous, the exterior border purplish cinereous-brown; speckled with minute black scales; an indistinct subbasal, and an antemedial interrupted zigzag transverse black-scaled line, an entire medial and a discal zigzag slender line, followed by two very indistinct submarginal zigzag bands, and a marginal row of black points; a small cinereous-speckled blackish orbicular spot, and large reniform mark: hindwing purplish cinereous-white, with a broad dusky purplish-black marginal band, which is speckled with cinereous from the anal angle, and the lower veins are also black speckled. Body cinereous-brown, abdomen palest; palpi with a black lateral longitudinal streak; legs cinereous above, with black tarsal bands.

Expanse $1\frac{3}{4}$ to 2 inches.

Genus ANODAPHA.

Polydesma,* Boisduval, Faun. Ent. Mad. Lep. p. 108 (1834); Guénee, Noct. ii. p. 439; Walker, Catal. Lep. Het. B. M. xiii. p. 1040.

Forewing elongate, triangular, broad, costa slightly arched towards the end,

* *Polydesmus* used by Latreille in 1802, for a genus of Myriapods.

apex pointed, exterior margin oblique, convex, scalloped; cell short, narrow, extending two-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-sixth from base of second, and fourth at one-third from base of third, fifth from end of the cell and joined by a very short spur to the third near its base; discocellular concave, radials from each end; middle median from angle close to end of the cell, lower at two-fifths before the end; submedian deeply curved from the base: hindwing short, very broad, apex very convex, exterior margin scalloped, abdominal margin long and densely fringed; cell short, extending one-third the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-fifth before the end; submedian and internal vein slightly curved. Body stout, abdomen tapering to the apex; palpi ascending, second joint reaching to level of the vertex, squamose, third joint lanceolate, about one-third length of second; antennæ serrate-setose in male, setose in female; legs most densely pilose; spurs long. (*A. boarmoides.*)

ANODAPHA BOARMOIDES (Plate 156, Fig. 2).

Polydesma boarmoides, Guénee, Noct. ii. p. 441 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1042.

Ochreous-brown, densely speckled with dark brown: forewing with a transverse basal, subbasal, medial, and a contiguous discal irregular zigzag black line, each ending in a dilated black streak on the costa; two obscure broad blackish zigzag submarginal bands, and a marginal black-bordered pale lunular line; a small black-lined oval orbicular spot, and reniform mark: hindwing with similar but more obscurely defined transverse markings. Front of thorax, head, palpi, and legs, pale ochreous; tarsi with brown bands.

Expanse $1\frac{3}{4}$ to 2 inches.

ANODAPHA ERUBESCENS.

Polydesma erubescens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 876 (1865).

"Female. Reddish; paler beneath. Wings with the interior and exterior lines brighter red, denticulated; submarginal line white, irregular, incomplete; marginal points black; a few black points along the costa. Forewings testaceous at the base, and with a red denticulated basal line; reniform mark pale, narrow, containing two black points: hindwings beneath whitish-testaceous, with two red denticulated lines. Palpi whitish on the inner side, third joint lanceolate, a little more than half-length of the second. Body beneath whitish-testaceous; abdomen with a whitish band on the hind border of each segment.

"Expanse 12 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

Genus PANILLA.

Male: forewing short, moderately broad and triangular; cell less than half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell and touching the third near its base; discocellular slender, bent near each end, concave in the middle, radials from the angles; middle median from near end of the cell, lower at nearly one-half before the end; submedian much curved from the base: hindwing ample, broad, exterior margin very convex; two subcostals from beyond end of the cell; discocellular very slender, radial from below the middle; two upper medians from beyond end of the cell, lower at one-third before the end; submedian and internal vein curved. Body slender, abdomen slightly tufted at apex; palpi very laxly pilose beneath to the tip; antennæ minutely pectinated; legs rather short, femora and tibiæ very laxly clothed with long silky hairs, spurs long.

Type, P. dispila.

PANILLA DISPILA (Plate 156, Fig. 12, ♀).

Homoptera dispila, Walker, Catal. Lep. Het. B. M. xxxiii. p. 890 (1865), ♂.
Homoptera divisistriga, Walker, MS. Brit. Mus. Coll.

Male and female ochreous-brown: forewing with a transverse equidistant basal, subbasal, and a medial zigzag pale-bordered black line, a curved discal denticulated line, followed by a pale sinuous submarginal line, and a marginal row of short black linear spots; a small black orbicular spot, a large black triangular spot beyond the middle of the discal line, and a smaller spot opposite it on the exterior margin; some black streaks along the costal edge: hindwing with a transverse antemedial and a recurved postmedial pale-bordered black denticulated line, a small spot at end of the cell, and a marginal row of black linear spots.

Expanse 1 inch.

Genus GIRPA.

Girpa, Walker, Catal. Lep. Het. B. M. xv. p. 1849 (1858).

Male: forewing rather short, arched towards end, apex pointed, exterior margin oblique, posterior angle convex; cell extending to two-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-third from base of second, fourth at three-fourths from base of third; fifth from end of the cell and slightly touching second at one-third below base of the third; discocellular concave, radials from upper and lower end; middle median from angle close to end of the cell, lower at two-fifths before the end; submedian much curved from the base: hindwing short, very broad, quadrate, the apex almost angular, exterior margin convexly angular in the middle, abdominal margin short; cell short, less than one-third the length; two subcostals from end of the cell; discocellular

very obliquely concave, radial from near lower end; two upper medians from prolonged lower end of the cell, lower median at one-fourth before the end; sub-median and internal vein straight. Body short, moderately stout; thorax thick, laxly clothed; palpi ascending, second joint stout, of equal breadth its entire length, reaching to level of the eyes, laxly squamose, third joint long, lanceolate, two-thirds length of the second, antennæ very long, minutely bipectinated; legs thick, femora and tibiæ, and hind tarsi, thickly clothed with woolly hairs.

GIRPA INANGULATA (Plate 156, Fig. 6, 6a, ♂ ♀).

Hulodes inangulata, Guénee, Noct. iii. p. 210 (1852), ♀.
Remigia optativa, Walker, Catal. Lep. Het. B. M. xiv. p. 1510 (1858), ♂.
Remigia optatura, Walker, *id.* xv. p. 1848 (1858), ♀.
Remigia comitata, Walker, *id.* xxxiii. p. 1018 (1865), ♀.
Hulodes umbrosa, Walker, Char. of Undes. Lep. Het. p. 91 (1869), ♂.

Male. Greyish ochreous-brown, numerously speckled with minute dark brown scales: forewing with eight transverse ill-defined dark brown-speckled sinuous bands, the fourth or middle band and the eighth or submarginal being the most distinct and broadest; orbicular mark small, oblique, reniform mark large, both defined by a brown line; the outer lines ending on the costa in a pale yellow dot; a marginal row of white-bordered black dots: hindwing with five transverse discal similar sinuous bands, and marginal row of dots. Thorax, head, palpi, and legs, greyish ochreous-brown, abdomen paler. Female. Greyish brownish-ochreous, minutely black speckled; with similar transverse markings as in male: forewing with the third, fourth, and eighth band most distinct, the latter being broader, almost black and speckled with white scales: hindwing with the bands more distinctly defined and slightly bordered with white scales.

Expanse $1\frac{5}{8}$ to $1\frac{7}{8}$ inch.

GIRPA FRATERNA (Plate 156, Fig. 5, 5a, ♂ ♀).

Male. Greyish-brown, or greyish ochreous-brown: forewing with apparently eight transverse dark ferruginous-brown sinuous bands, which are more or less distinct, the three outer bands partly coalescent, and thus form a wide angulated fascia; orbicular and reniform marks ferruginous-brown; a marginal row of black dots: hindwing with a discal transverse series of similar ferruginous-brown bands, and marginal dots, the outer bands partly coalescent as in forewing. Body greyish-brown. Female greyish ochreous-brown, with similar transverse dusky-brown bands.

Expanse $1\frac{3}{8}$ to $1\frac{4}{8}$ inch.

Distinguishable from *G. inangulata* by the smaller size of both sexes. The male also having a comparatively shorter forewing, and a decidedly more angular hindwing.

GIRPA ERIOPHORA (Plate 156, Fig. 4, ♀).

Hulodes eriophora, Guénee, Noct. iii. p. 210 (1852), ♀.
Ophisma deficiens, Walker, Catal. Lep. Het. B. M. xiv. p. 1383 (1858) ♀.
Remigia perfidiosa, Walker, *id.* xiv. p. 1511 (1858), ♀.
Hypopyra apicalis, Walker, Journ. Linn. Soc. Zool. vii. p. 178 (1864), ♀.
Ophisma cumulifera, Walker, MS. B. M. Coll, ♀.

Male and female. Dark lilacine-cinereous. Male: forewing with a transverse obsolescent subbasal and an incomplete antemedial blackish-speckled zigzag line, a faint medial undulated line, three nearly erect discal denticulated more distinct lines, followed by a broader angulated outer duplex line, and a slender blackish marginal line with white-bordered square tipt dots; orbicular spot and reniform mark very indistinct, rufous-brown: hindwing with an inner black-speckled discal fascia, four outer denticulated lines, and a marginal black-pointed line. Female: forewing with similar blackish-speckled subbasal and antemedial incomplete lines; medial line obsolete; the three black discal lines and the outer duplex angulated line prominent, the interspace between the inner and outer discal line being broadly and irregularly dark ferruginous; reniform mark prominent, obliquely curved, narrow, and dark ferruginous; orbicular obsolescent; marginal pointed line as in male: hindwing with five similar transverse lines, which are most distinct posteriorly, and broader, the points slightly white speckled, and there is a small slightly ferruginous patch between the outer lines near posterior angle; a marginal black square-pointed line.

Expanse, ♂ $1\frac{7}{8}$, ♀ $2\frac{1}{8}$ inches.

GIRPA PERTENDENS (Plate 156, Fig. 3, 3*a*, ♂ ♀).

Remigia pertendens, Walker, Catal. Lep. Het. B. M. xiv. p. 1512 (1858), ♂.

Male and female lilacine-cinereous. Male: forewing with a transverse subbasal, and an antemedial ill-defined black-speckled zigzag line, a slightly broader undulated medial fascia, followed by two denticulated discal lines, and two outer angulated ferruginous-brown bordered lines, the two outer lines being more distinct and with a few clustered whitish speckles near upper end; a slender black marginal line with white bordered points; a small blackish-speckled orbicular spot, and a larger reniform mark: hindwing with an inner discal transverse blackish-speckled fascia, two outer denticulated lines, and two lunular ferruginous-brown angulated lines, and a marginal black-pointed line. Female: forewing with the inner lines, orbicular and reniform spots obsolescent; the two outer discal angulated lines coalescent, widened and white-speckled at the apical end, and bordered by the upper parts of the adjoining lines; marginal pointed line less distinct: hindwing with the lines broader posteriorly, ferruginous speckled, obsolescent anteriorly; marginal pointed line also indistinct.

Expanse, ♂ $1\frac{6}{8}$, ♀ $1\frac{7}{8}$ inch.

Both sexes of this species are distinguishable from *G. eriophora* by the shorter, broader, and less falcated forewing, and larger hindwing, the discal denticulated lines are somewhat different and more oblique, the outer angulated line being also comparatively further from the exterior margin.

Genus CADUCA.

Male: forewing short, broad, triangular; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at one-sixth from base of second, and fourth at two-thirds from base of third, fifth from end of the cell and touching third near its base; discocellular slender, concave, bent near lower end, radials from upper end and lower angle; middle median from near end of the cell, lower at nearly one-half before the end; submedian much curved near the base: hindwing ample, broad, apex and exterior margin very convex; cell extending to one-third the length; two subcostals on a footstalk at a short distance beyond end of the cell; discocellular extremely slender, concave, radial from near lower end; two upper medians from beyond end of the cell, lower at one-fourth before the end; submedian and internal vein slightly curved. Body somewhat slender; palpi obliquely ascending, laxly pilose beneath, second joint reaching to level of the eyes, third joint short, pilose in front; antennæ serrated, pectinated, the branches broad at the base; legs slender, tibiæ slightly pilose, middle and hind tibiæ with very long spurs, tarsi long.

Type, C. meleagris.

CADUCA MELEAGRIS (Plate 156, Fig. 7).

Alamis meleagris, Felder and Rogenh. Nov. Voy. Lep. iv. pl. iii fig. 32 (1874).

Male. Dark ochreous-brown: forewing with a transverse basal and a subbasal brownish-white bordered black sinuous line, a discal denticulated line, followed by a submarginal whitish lunular line, and a marginal series of whitish-bordered Y-shaped black marks; a small oval blackish orbicular spot, and a large reniform mark, both with a few whitish speckles; the area between subbasal and discal lines brownish-white transversely flecked with brown strigæ, cilia alternated with black: hindwing with two transverse medial indistinct blackish fasciæ, a curved discal black denticulated line with a whitish-speckled outer border from its middle to anal end, followed by whitish lunules and a marginal series of whitish-bordered Y-shaped black marks; cilia alternated with white. Body, and palpi dark ochreous-brown, with whitish speckles; legs brown with whitish bands.

Expanse $1\frac{3}{8}$ inch.

Genus HOMOPTERA?

Homoptera, Boisd. Guérin's Icon. Règ. Anim. p. 522, pl. 89 (1829).

HOMOPTERA COSTIFERA.

Homoptera costifera, Walker, Catal. Lep. Het. B. M. xxxiii. p. 886 (1865).

"Male. Reddish fawn colour, cinereous fawn colour beneath. Wings with the usual pale denticulated lines almost obsolete; marginal points white; lines more distinct beneath: forewings with submarginal white points; the third from the costa much larger than the others, and accompanied by a more exterior testaceous dot; a white apical spot containing a black point; three white costal subapical points; orbicular and reniform marks nearly obsolete: hindwings with an irregular testaceous mark in the disc. Third joint of the palpi about one-third as long as the second; thorax with a whitish cinereous band, which is continued along the costa of the forewings.

"Expanse 8 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

HOMOPTERA PROCUMBENS.

Homoptera procumbens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 886 (1865).

"Female. Brown, slightly tinged with cinereous; cinereous beneath. Wings with five blackish pale-bordered undulating lines; marginal lunules black, cinereous-bordered: forewings with some white points along the costa; orbicular and reniform marks small, black, pale-bordered.

"Expanse 9 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

HOMOPTERA RETRAHENS.

Homoptera retrahens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 887 (1865).

"Male and female. Cinereous fawn colour, more cinereous beneath. Wings with several pale indistinct denticulated lines; interior and exterior lines blackish, denticulated, the former incomplete; submarginal points black; marginal festoon blackish: forewings with blackish marks along the costa; a blackish spot in the disc beyond the exterior line; orbicular and reniform marks almost obsolete: hindwings with the interior border fringed. Palpi short; third joint less than half length of the second; antennæ hardly more than half length of the body.

"Expanse 10 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

Family HYPOGRAMMIDÆ.

Imago with moderated sized or small wings: forewing rather elongated and narrow. Palpi mostly ascending and rather long; antennæ long; abdomen frequently crested.

Genus BRIADA.

Briada, Walker, Catal. Lep. Het. B. M. xiii. p. 1097 (1857).

Male: forewing elongated, triangular, costa slightly arched, apex obtuse, exterior margin oblique, slightly convex, denticulated, posterior margin convex at the base; cell extending to half the length; first subcostal emitted at nearly one-half before end of the cell, second at one-sixth, trifid, fifth from end of the cell and slightly touching third near its base; discocellular outwardly oblique, concave, radials from upper end and close to lower end; middle median from one-seventh before end of the cell, lower at three-sevenths; submedian very deeply curved at the base: hindwing rather ample, broad, apex convex, exterior margin denticulated; cell extending to one-third the length; two subcostals from end of the cell; discocellular outwardly oblique, concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein slightly curved. Body moderately stout; palpi ascending, second joint laxly squamose, long, reaching above the eyes, third joint long, cylindrical, about same length as second; antennæ setose; legs densely clothed with long silky hairs, hind tibiæ fringed, spurs long. (*Type*, B. precedens.)

BRIADA PRECEDENS (Plate 156, Fig. 8, ♀).

Briarda precedens, Walker, Catal. Lep. Het. B. M. xiii. p. 1098 (1857), ♀.

Male: forewing dark ochreous-brown; base of the wing, a broad short oblique patch from middle of the costa, and a patch at the apex darker brown; with two ill-defined transverse basal, two subbasal, two medial, and two discal black pale-bordered zigzag lines, a less distinct submarginal line, and a marginal row of ochreous-white bordered black dots; some indistinct black streaks below the apex and on the disc; a punctiform white spot at upper end of the cell, and another at base of the wing: hindwing cinereous-brown, with darker exterior border. Body, palpi, and legs dark ochreous-brown. Female: forewing pale brownish-ochreous, with prominent dark brown basal, medial, and apical patches, which are traversed by black zigzag lines, these lines being more or less obsolescent across the pale interspaces: hindwing paler than in the male.

Expanse 1$\frac{1}{8}$ to 1$\frac{3}{8}$ inch.

Genus CORSA.

Corsa, Walker, Catal. Lep. Het. B. M. xiii. p. 1101 (1857).

Male: forewing rather short, triangular; cell extending to more than half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, third at one-sixth from base of second, and fourth at two-thirds from base of third, fifth from end of the cell, bent upward and touching third near its base; discocellular slightly concave and bent close to each end, radials from the angles; middle median from close to end of the cell, lower at one-third before the end; submedian much curved from the base: hindwing short, broad; exterior margin convex; two subcostals from end of the cell; discocellular very slender, slightly oblique and concave, radial from near lower end; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body moderately stout; abdomen attenuated at the tip, extending beyond the hindwings; palpi erect, compressed, second joint reaching to level of the eyes, stout, squamose, third joint lanceolate, more than half length of second; antennæ bipectinated; forelegs densely clothed with long silky hairs, middle femora pilose, hind femora and tibiæ densely clothed, first joint of tarsus also hairy; spurs long.

CORSA LIGNICOLORA (Plate 156, Fig. 9).

Corsa lignicolora, Walker, Catal. Lep. Het. B. M. xiii. p. 1101 (1857).

Chestnut-brown: forewing with a broad transverse basal black streaked band, a broad purplish-brown discal fascia, followed by a curved submarginal pale purplish-brown line, a blackish apical border, and pale-bordered black marginal spots; medial area pale purplish-brown, with some transverse black streaks from the costa; orbicular and reniform spot pale chestnut-brown: hindwing with a pale purplish-brown submarginal line, and pale-bordered black marginal lunules. Cilia alternated with black. Body and legs above chestnut-brown.

Expanse $1\frac{1}{2}$ inch.

Genus CALLYNA.

Callyna, Guénee, Noct. i. p. 112 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1118.

Forewing elongated, rather broad, costa slightly arched at the base, apex obtuse, exterior margin slightly oblique, and scalloped, posterior margin convex towards the base; cell extending more than half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, third at one-sixth from base of second, and fourth at one-fifth from base of third; fifth from end of the cell, and joined to the third, by a short erect spur, half-way between its base and the fourth; discocellular slightly bent near each end, radials from the angles; middle median from angle close to end of the cell, lower at nearly one-third before the end;

submedian recurved from the base: hindwing short, broad, apex convex, exterior margin convex, waved; cell less than half the length; two subcostals from end of the cell; discocellular slightly oblique, bent below the middle, radial from the angle; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body thick, thorax laxly clothed; abdomen carinated above, tip pointed; palpi ascending, curved, reaching to the vertex, compactly squamose, third joint short, thick, conical; antennæ setaceous; legs stout, tibiæ clothed with short coarse hairy scales, tarsi thick; spurs long and stout.

(*Type*, C. Siderea.)

CALLYNA COSTIPLAGA (Plate 156, Fig. 10).

Forewing violaceous-brown, minutely speckled with yellowish-ochreous scales; a broad short costal transverse antemedial and a postmedial violet-black irregular quadrate band, each margined by a pale-bordered blackish line, which indistinctly form the ordinary transverse lines, the postmedial line being sinuous below the band and with white points; a submarginal pale zigzag band with black streaks below middle of the band, and a pure white patch between the band and the apex; a marginal blackish lunular line; orbicular and reniform mark large, defined by yellowish-ochreous scales: hindwing dusky brown, paler towards the base, cilia pale cinereous-brown. Body violaceous-brown, abdomen paler; thorax with a broad black collar; head, and tip of palpi black; palpi beneath, and legs yellowish-ochreous; legs with blackish speckled bands.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{7}{8}$ inch.

Genus DINUMMA.

Dinumma, Walker, Catal. Lep. Het. B. M. xv. p. 1805 (1858).
Ortheaga, Walker, *id.* xxxiii. p. 927 (1865).

Forewing elongated, costa slightly arched, apex pointed, exterior margin slightly oblique, posterior margin convex at the base; cell extending to half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-fifth from base of second, and fourth at three-fourths from base of third, fifth from end of the cell, and very slightly touching third near its base; discocellular outwardly recurved, bent close to each end, radials from the angles; middle median from close to end of the cell, lower at one-third before the end; submedian recurved: hindwing short, apex and exterior margin very convex; cell short, reaching only one-third the length; two subcostals from end of the cell; discocellular bent in the middle, radial from near lower end; two upper medians from end of the cell, lower from close to the end; submedian and internal vein straight. Body stout; thorax squamous, abdomen crested; palpi erect, long, rather slender, squamous, second joint

much curved, reaching level of the eyes, third joint lanceolate, about half length of the second; antennæ slender, setose; legs rather slender, femora slightly fringed beneath, tibiæ slightly pilose, spurs long.

Type, D. placens.

DINUMMA PLACENS (Plate 156, Fig. 11).

Dinumma placens, Walker, Catal. Lep. Het. B. M. xv. p. 1806 (1858).

Forewing purplish violet-brown, with a transverse basal and an antemedial zigzag black line, and a postmedial irregularly undulated black line, indistinctly bordered by a slender purplish-white line; the outer margin traversed by reddish and dark brown fasciæ and with a submarginal row of short bluish-white longitudinally disposed spots, the third spot from the apex and the lowest being enclosed in a large black spot; the broad medial area darker glaucescent violet-brown; reniform mark small, black: hindwing pale violet-brown. Body cinereous-brown; tegulæ, and crests violet-black; palpi, and legs brown; tarsi with pale bands.

Expanse $1\frac{3}{10}$ inch.

Genus GADIRTHA.

Gadirtha, Walker, Catal. Lep. Het. B. M. xiii. p. 1102 (1857).

Male: forewing long, narrow; costa arched, exterior margin slightly angular in the middle, very oblique hindward, posterior margin convex towards the base; cell extending more than half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, third at one-third from base of second, and fourth at one-half from base of third, fifth from end of the cell and joined to third by a short spur near its base; discocellular bent outward below the middle, radials from upper end and near lower end; middle median from angle below end of the cell, lower at more than one-third before the end; submedian much curved from the base: hindwing short, rather narrow; two subcostals from end of the cell; discocellular very slender, deeply concave, bent close to lower end, radial from the angle; middle median from angle close to end of the cell, lower at more than one-third; submedian and internal vein straight. Body stout, abdomen extending beyond hindwings, keeled above; palpi long, ascending, second joint laxly squamose, reaching to level of eyes; third joint linear, compressed, two-thirds length of second; antennæ stout, serrated; legs stout, pilose, middle and hind tibiæ with stout spurs.

(*Type*, G. impingens.)

GADIRTHA RECTIFERA.

Gadirtha rectifera, Walker, Catal. Lep. Het. B. M. xxxiii. p. 897 (1865), ♀.

"Female. Cinereous, mostly whitish beneath: forewings shaded here and there with pale brown; a black dot at the base, and a black almost straight slightly oblique

interior line; exterior line pale cinereous, much bent outward, with a slight interior blackish border; submarginal line pale cinereous, denticulated, accompanied by some reddish marks; marginal lunules brown; reniform mark large, blackish-bordered, irregularly round, containing a blackish streak and a white point: hindwings cinereous, semi-hyaline, with a very broad brown border, fringe pale cinereous. Second joint of palpi whitish beneath; abdomen with brown curved marks on each side.

"Expanse 11 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

GADIRTHA DECRESCENS.

Gadirtha decrescens, Walker, Catal. Lep. Het. B. M. xiii. p. 1104 (1857), ♂.

"Male. Brown, paler beneath: forewings varied with pale brown; with some black patches, a pale apical spot which contains some black streaks, and with black marginal lunules: hindwings with paler ciliæ.

"Expanse 10 lines."

Genus SELEPA.

Selepa, Moore, Catal. Lep. Mus. E. I. C. ii. p. 353 (1858).

Wings small: forewing elongated, rather broad; costa much arched at the base, apex not pointed, exterior margin oblique, posterior margin convex at the base; cell disposed in middle of the wing and extending three-fifths the length; costal vein at a wide distance from the margin; first subcostal emitted at two-sixths before end of the cell, second at one-sixth, trifid, third from very near base of second, fourth at two-thirds from base of third, fifth from end of the cell and joined to third for a short distance beyond the base; discocellular outwardly oblique, bent close to each end, radials from the angles; middle median from near end of the cell, lower at two-fifths before the end; submedian recurved: hindwing short, apex hardly pointed, exterior margin very oblique, convex; cell extending half the length; two subcostals from end of the cell; discocellular much curved, radial from lower end; middle median from close to end of the cell, lower at one-third; submedian and internal vein straight. Body small, stout, abdomen keeled above; palpi porrect, laxly covered with hairy scales which are projected forward; second joint projected half beyond the head, third joint about one-third length of second; antennæ stout, slightly setose in male, basal joint thick, with a short spinous point in front; front legs fringed beneath, middle and hind legs smooth, spurs rather long.

(*S. Celtis.*)

SELEPA CELTIS (PLATE 158, FIG. 5, ♂).

Selepa Celtis, Moore, Catal. Lep. Mus. E. I. C. ii. p. 353, pl. 9*a*, fig. 9, pl. 16, fig. 8, 8*a* (1857).
Subrita curviferella, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1745 (1865).

Male: forewing pale violaceous greyish-cinereous, obliquely clouded with a darker violaceous-brown tint across the lower exterior border, and the discal and basal areas; with a transverse antemedial slender black pale-bordered duplex line, which is angulated outward and sinuous below the median vein and also waved and curved slightly outward at the upper end; a similar postmedial line which is more acutely angulated inward and sinuous below the median, and curved slightly inward at the upper end; the pale outer border of the lines margined by a slight blackish sinuous fascia, followed by a similar submarginal fascia, and from the postmedial line to the posterior angle is a slight blackish oblique streak of raised scales; orbicular mark composed of a black spot of raised scales and bordered on its inner side by a pale lunule; reniform mark of pale-bordered black raised scales and enclosed by a slender ring; a slender black marginal line: hindwing cinereous-white, with pale cinereous-brown outer border. Thorax, head, palpi, and forelegs above violaceous greyish-cinereous; abdomen pale cinereous-brown; palpi beneath, and hindlegs cinereous-white. Female: forewings paler, the antemedial duplex line angulated in front of the orbicular mark, and the postmedial line more curved inward to the costa, its lower end composed of raised black scales; there is also a slender black streak above the lower median and another below it, both of which end at the submarginal sinuous fascia: hindwing and body paler than in male.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

VARIETY. Female (Plate 158, fig. 4): forewing with similar transverse markings, between which is a longitudinal medial black fascia.

SELEPA STRIGIFERA (PLATE 158, FIG. 3, 3*a*, larva).

Forewing pale violaceous greyish-cinereous, more or less longitudinally clouded with darker violaceous-brown between the veins; crossed by an outwardly oblique angulated pale-bordered black antemedial line, and a similar postmedial line which is widely and evenly curved outward from above the median vein to the costa; followed by a prominent black sinuous submarginal fascia; orbicular and reniform mark composed of grey-bordered black raised scales; the lower end of the transverse lines and fascia also composed of raised scales in the female; a slender black streak above the lower median vein and another beneath it, the latter extending to base of the wing; the costal, subcostal, and median veins also slightly lined with black: hindwing cinereous-white, with pale cinereous-brown outer border. Thorax, head, palpi, and

forelegs above violaceous greyish-ochreous; abdomen, and hindlegs pale cinereous-brown.

Expanse, ♂ $\frac{6}{8}$, ♀ 1 inch.

Larva with 16 legs, narrow; pale brownish-ochreous, with a dorsal erect series of slender black hairs, those on the anterior and posterior segments longest and spatular at the tip; a lateral series of short decumbent white hairs; a subdorsal black-spotted green streak extending from 6th to 10th segment, and a dorsal black spot at base of hairs on 3rd to 6th, 10th, and last segment. Pupa olivaceous brownish-ochreous.

Genus SYMITHA.

Symitha, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1731 (1866).
Sarrothripa, Felder et Rogen. Nov. Voy. Lep. iv. pl. 106, fig. 16 (1874).

Wings small: forewing elongated, narrow, elliptic; cell extending nearly three-fifths the length, disposed along middle of the wing; first subcostal emitted at nearly one-half before end of the cell, second at one-tenth, trifid, third at one-third from base of second, and fourth at two-thirds from base of third; fifth from end of the cell and joined to third by a short spur close to its base; discocellular outwardly oblique, bent close to each end, radials from the angles; middle median from angle below end of cell, lower at about one-third; submedian much recurved: hindwing rather narrow; exterior margin very oblique; cell extending to half the length; first subcostal emitted before end of the cell; discocellular slightly concave, radial from below the middle; two upper medians from end of the cell, lower at one-third; submedian and internal straight. Body moderately stout; head with a slight projecting tuft in front; palpi porrect, very long, laxly squamose, second joint slightly dilated at tip, extending half beyond the eyes, third joint as long as second, flattened, fusiform; fore tibiæ laxly pilose beneath; middle and hind spurs long; antennæ setose, basal joint thick.

SYMITHA INDICA (Plate 158, Fig. 6).

Sarrothripa indica, Felder et Rogen. Nov. Voy. Lep. iv. pl. 106, fig. 16 (1874).

Cinereous-brown, clouded indistinctly with darker brown below the apex and on middle of the costa; crossed by an indistinct outwardly-oblique subbasal line, an antemedial cinereous-bordered blackish sinuous line, and an inwardly oblique postmedial line; followed by a submarginal row of points, which increase in size posteriorly, the lowest point being the largest and most distinct; a marginal row of slender black points; orbicular and reniform marks indistinct, the intervening space with a dark brown speckled streak: hindwing pale brownish-cinereous, whitish at the base. Body and legs above cinereous-brown.

Expanse $\frac{9}{10}$ inch.

Genus CLETTHARA.

Cletthara, Walker, Catal. Lep. Het. B. M. xxvii. p. 101 (1863).

Male. Wings small: forewing rather short, and broad; costa much arched from the base, exterior margin slightly oblique, posterior margin convex towards the base; cell extending beyond half the length; first subcostal emitted at one-half before end of the cell, second from end of the cell, quadrifid; discocellular obliquely concave, bent close to upper end, radials from the angle and close to lower end; middle median from near end of the cell, lower at about one-fourth; submedian much curved: hindwing triangular; in the male the costa is distorted, it being convex at the base, folded upward and fringed with long hairs to the middle; apex almost pointed, exterior margin very oblique; cilia long; two subcostals from end of the cell; discocellular inwardly oblique; radial and two upper medians on a footstalk beyond end of the cell, lower median at about one-third before the end; submedian and internal vein much curved. Body stout, thorax very robust; palpi suberect, smooth, second joint reaching to middle of the eyes, third joint linear, longer than second; antennæ rather stout, slightly pubescent towards the base in the male, basal joint thick; forelegs thick, fore tibiæ thickly clothed, fore tarsi short and thick; middle tibiæ slightly pilose; hindlegs long, smooth; spurs long.

Type, C. velata.

CLETTHARA BASALIS (PLATE 158, FIG. 7).

Forewing pale violaceous ochreous-brown; crossed by a medial angulated erect white-bordered black line, and a postmedial elbowed similar line, the intermediate area darker at the upper end and almost black at the posterior end; reniform spot minute, black; the submarginal area longitudinally streaked with black in the middle and with a whitish spot; marginal dots black; a black costal patch at base of the wing: hindwing pale cinereous at the base, brown externally; cilia edged with cinereous-white. Body and legs above pale violaceous ochreous-brown.

Expanse $\frac{6}{10}$ inch.

Genus PLOTHEIA.

Plotheia, Walker, Catal. Lep. Het. B. M. xiii. p. 1108 (1857).
Egelesta, Walker, *id.* xv. p. 1747 (1858).
Galleriomorpha, Felder, Wien. Ent. Monats. vi. p. 37 (1862).
Othora, Walker, Catal. Lep. Het. B. M. xxxiii. p. 902 (1865).

Forewing elongated, rather narrow, costa arched, apex acute, exterior margin convex, very slightly oblique, posterior margin convex at the base; cell long, narrow, extending to about three-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-third from base of second, and fourth at one-half from base of third; fifth curved upward from end of the cell, and

joined to third by a short spur near its base; discocellular slender, outwardly oblique, radials from upper and near lower end; middle median from angle near end of the cell, lower at one-third; submedian slightly curved: hindwing short, small, apex convex; first subcostal from an angle immediately before end of the cell; discocellular deeply concave, slender, radial from close to lower end; middle median from angle near end of the cell, lower at one-third; submedian and internal vein straight. Body moderately stout, abdomen fusiform, keeled above, flat beneath, base and thorax slightly crested, and with a slight anal tuft in male, pointed in female; palpi porrect, laxly squamose, scales long above second joint and partly covering third joint; second joint projecting half beyond the head, third joint linear, nearly as long as second; antennæ of male setulose, furnished with long setæ towards the base, setose in female; legs stout, forelegs densely pilose, middle and hindlegs laxly squamose, spurs long.

Type, P. frontalis.

PLOTHEIA FRONTALIS (Plate 157, Fig. 6, ♀).

Plotheia frontalis, Walker, Catal. Lep. Het. B. M. xiii. p. 1109 (1857), ♀.
Othora canescens, Walker, *id.* xxxiii. p. 904 (1865), ♀.

Female: forewing pale brownish-ochreous; crossed, by apparently five, inner indistinct blackish sinuous lines, and a curved discal denticulated line, followed by a less apparent submarginal line; orbicular and reniform spots composed of black raised scales, the latter with an indistinct outer ring: hindwing pale ochreous-brown. Body pale brownish-ochreous; abdomen with indistinct brown segmental dorsal rings; legs ochreous, with pale brown bands.

Expanse $1\frac{2}{10}$ inch.

PLOTHEIA LATIVITTA (Plate 157, Fig. 11, ♀).

Female: forewing very pale brownish-ochreous, with a broad purplish violet-brown anterior band extending from the costa near the base, below the cell, and thence to the exterior margin below the apex, leaving a slender pale costal space near the apex, the wing also indistinctly crossed by the ordinary sinuous blackish lines; the orbicular and reniform spots of raised black scales: hindwing pale ochreous-brown; ciliæ ochreous-white. Body very pale brownish-ochreous; abdomen with indistinct brown segmental rings; forelegs brown above.

Expanse $1\frac{2}{10}$ inch.

PLOTHEIA SPURCATA (Plate 157, Fig. 5, ♂, 7, ♀).

Gadirtha spurcata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 896 (1865), ♀.
Othora lata, Walker, *id.* p. 909, ♀.

Male: forewing dusky greyish-brown, crossed by eight black sinuous lines, the

five inner lines oblique, the middle and discal lines much curved and irregular; the lines bordered by brownish-ochreous from their costal end; a pale-bordered sinuous submarginal line, and a marginal white-pointed black lunular line; a small orbicular and reniform spot of black raised scales, the latter enclosed by a slender black oblique outer ring: hindwing and abdomen dusky cinereous-brown, the latter with two dorsal oval black rings on each segment; anal tuft cinereous; cilia edged with pale cinereous-brown. Thorax and head dusky greyish-brown, thorax white beneath; palpi blackish above, white beneath; legs brown above, with blackish bands, white beneath.

Female: forewing pale brownish-ochreous, the markings as in male: hindwing and body paler.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{3}{10}$ inch.

Variety (Plate 157, fig. 12). Female: forewing pale brownish-ochreous, the transverse lines rather indistinct; an angular blackish fascia extending from the costa near the base to exterior margin below the apex.

PLOTHEIA GUTTULOSANA (Plate 158, Fig. 1, ♂).

Gadirtha guttulosana, Walker, Catal. Lep. Het. B. M. xxxiii. p. 897 (1865), ♂.
Othora onusta, Walker, *id.* p. 905, ♂.
Othora signata, Walker, *id.* p. 906, ♂.

Male and female: forewing olivaceous brownish-ochreous, sparsely speckled with minute black scales; crossed by three pale-bordered black basal broad diffused sinuous lines, two slender antemedial denticulated lines, two less distinct recurved medial lines, followed by a submarginal broad sinuous line, and a slender marginal lunular line; the inner discal line with broad black macular points, the inner medial line accompanied by two black spots below the cell; a distinct small black orbicular and reniform spot, the latter enclosed by a slender black oval ring: hindwing brown, palest at the base; cilia edged with cinereous-white. Body olivaceous brownish-ochreous; abdomen with two dorsal rows of black oval rings; palpi and legs with brown bands.

Expanse, ♂ 1, ♀ $1\frac{2}{10}$ inch.

PLOTHEIA BASIFASCIA (Plate 157, Fig. 8, ♂).

Othora basifascia, Walker, Catal. Lep. Het. B. M. xxxiii. p. 911 (1865), ♀.

Male and female: forewing pale cinereous-brown, slightly speckled with minute black scales on the anterior and posterior border, a broad brownish oblique subbasal band crossed by blackish sinuous lines, the two outer lines approximate and most distinct, a black line also obliquely crossing the band along the submedian vein; an

indistinct medial sinuous fascia, two discal much outwardly-curved slender black denticulated approximate lines, the outer line indistinct, followed by a submarginal sinuous white-pointed line, and a slight brown marginal line with a white point on each vein; apex and posterior angle clouded with brown and slightly black streaked; orbicular spot small, composed of raised black scales tipt with white, reniform mark large, defined by a slender black irregular shaped ring and a central spot of black raised scales: hindwing dusky cinereous-brown; cilia whitish-cinereous. Body cinereous-brown; tegulæ cinereous tipt with black; abdomen dusky cinereous at the sides, each segment with two dorsal oval black rings; palpi black speckled; tibiæ and tarsi with black bands.

Expanse $1\frac{2}{10}$ inch.

Variety. Male (Plate 157, fig. 10): forewing ferruginous-brown, with short black sinuous streaks from the costa, and an antemedial oblique transverse nearly straight line, the black orbicular and reniform spots both of same size, the former confluent with the transverse line; apex and posterior angle clouded and black streaked. Expanse $1\frac{2}{10}$ inch.

PLOTHEIA LICHENOIDES (Plate 157, Fig. 9, ♂).

Galleriomorpha lichenoïdes, Felder, Wien. Ent. Monats. vi. p. 37 (1862); Nov. Voy. Lep. iv. pl. 100, fig. 15 (1874), ♂; Neitner, Observ. on Enemies of the Coffee Tree in Ceylon, p. 23.

Male: forewing dusky violaceous greyish-brown, crossed by a subbasal pale brownish-ochreous band, which is bordered outwardly by a distinct white waved line; a prominent white curved discal line, followed by a submarginal indistinct ferruginous sinuous line; the lower subcostal vein and upper radial, and the submedian also lined with white; base of wing and medial area crossed by very indistinct sinuous blackish lines; a small orbicular and reniform spot of black raised scales: hindwing dusky brown; cilia cinereous-brown. Body dusky violaceous greyish-brown; thorax densely speckled with white scales; abdominal rings indistinct; legs with dark brown bands.

Expanse $1\frac{2}{10}$ inch.

According to the observations of Mr. Nietner the larva of this species is occasionally found feeding upon the Coffee-tree.

PLOTHEIA GRISEOVIRENS (Plate 158, Fig. 2, ♀).

Female: forewing pale sap-brown, crossed by greyish-white bordered indistinct blackish sinuous inner and outer lines, and prominent diffused black recurved discal lines, the latter with a prominent black streak above the lower end; a ferruginous submarginal sinuous line; the medial area between the discal and inner lines greyish-

white, enclosing a small black orbicular spot and clouded reniform mark: hindwing brown, palest at the base; cilia edged with cinereous-white. Thorax, head, palpi, and legs above sap-brown, speckled with grey; abdomen cinereous-brown, with black dorsal segmental rings; legs with dark bands.

Expanse $1\frac{3}{10}$ inch.

PLOTHEIA VELATA.

Othora velata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 902 (1865), ♂.

"Male. Dark ferruginous-brown: forewings with six black zigzag lines; first, second, and third lines antemedial, the other three bent beyond the reniform mark; three large cinereous patches; first patch costal, extending to the tip, second on the interior border, larger than the third, which is on the interior angle; orbicular and reniform distinguished by two black dots, the latter enclosed in a large black ringlet; marginal points black: hindwings æneous-brown. Body whitish beneath. Head whitish in front; palpi whitish towards the base, thorax with two very short cinereous stripes; legs whitish, tibiæ and tarsi blackish above.

"Expanse 16 lines."

PLOTHEIA CINERASCENS.

Othora cinerascens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 903 (1865), ♀.

"Female. Cinereous: forewings with some indistinct brown zigzag lines; two blackish denticulated lines on the inner side of the orbicular mark; a blackish much outward curved line at half distance between the reniform and exterior border; submarginal line pale cinereous, zigzag, incompletely bordered with ferruginous; marginal lunules blackish; a brown spot on the end of interior border; orbicular and reniform distinguished by two black dots of obliquely elevated scales, the latter enclosed in a large irregular blackish ringlet; hindwings with a brownish marginal band. Body beneath white; palpi with a blackish stripe at the base, and with a tuft at the tip above; thorax with a blackish stripe; fore tegulæ with a blackish oblique streak on each side; legs beneath, and femora white.

"Expanse 18 lines."

PLOTHEIA ALBOTECTA.

Othora albotecta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 903 (1865), ♀.

"Female. Cinereous-brown: forewings white; base, one-third of the length of the costa, and a large apical patch cinereous-brown, with the usual darker lines; marginal lunules black in the patch: hindwings cinereous, with a broad brownish border. Body white beneath; pale white beneath, with a black stripe on the base, and with a long porrect tuft above the tip; legs white, tibiæ and tarsi above cinereous, with brown bands.

"Expanse 18 lines."

PLOTHEIA PLAGIATA.

Othora plagiata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 907 (1865), ♂.

"Male. Blackish: forewings glaucous-tinged; with some transverse black zigzag lines, and with three whitish patches; first patch small, elongated, very near the base, second large, extending to the costa, including the reniform, accompanied by three whitish streaks near its hind border; third small, narrow, extending to exterior border; the line beyond second patch much curved outward; a blackish-cinereous apical spot, containing some little white streaks; submarginal and marginal points white; reniform mark blackish, small, enclosed in a blackish ringlet: hindwings dark cinereous. Body and palpi white beneath; palpi with a black stripe on the side, tufted at tip; legs white beneath.

"Expanse 18 lines."

PLOTHEIA CONCISA.

Othora concisa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 910 (1865), ♀.

"Female. Cinereous fawn colour: forewings with three brown indistinct post-medial lines which are much bent outward; submarginal line cinereous, zigzag; marginal lunules brown, with a white oblique band near the base, bordered with deep black on the outer side; orbicular and reniform marks represented by brown dots, of which the scales are obliquely ascending, the latter enclosed in a large irregular brown ringlet: hindwings cinereous. Palpi white beneath, deep black on the side towards the base.

"Expanse 18 lines."

PLOTHEIA IMPRIMENS.

Othora imprimens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 911 (1865), ♂.

"Male. Dark brown: forewings with a broad black stripe which extends along the interior border and is broadest at the base, where it occupies nearly the whole breadth, this stripe contains two white lines and two white patches; a white apical patch; some diffuse indistinct blackish lines and two distinct concise black lines, between which there is a large irregular black ringlet, which contains a little black line: hindwings cinereous-brown. Body and legs whitish beneath; palpi whitish beneath; abdomen cinereous-brown, black speckled, with a black stripe which extends along nearly half the length from the base, hind borders of the segments whitish.

"Expanse 15 lines."

PLOTHEIA SUBGLAUCA.

Othora subglauca, Walker, Catal. Lep. Het. B. M. xxxiii. p. 905 (1865), ♂.

"Male. Dark brown: forewings with transverse black denticulated lines; more than half the exterior surface interruptedly greenish-cinereous; a double outward curved blackish line beyond the reniform mark; submarginal and marginal points

white; some short white streaks near the tip of the costa; orbicular and reniform mark composed of blackish elevated scales, the latter enclosed in a double brown ringlet: hindwings cinereous, brown towards the exterior border. Body and palpi white beneath, palpi with a black stripe extending to near the tip; legs white beneath; femora entirely white.

"Expanse 18 lines."

PLOTHEIA ALBIVITTA.

Othora albivitta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 908 (1865), ♀.

"Female. Cinereous-brown: forewings with some blackish zigzag lines, most of these are interrupted by a broad irregular white stripe, which extends from the base to full three-fourths of the length, where it is contiguous to a double angular blackish-brown line; submarginal line cinereous, zigzag, bordered with ferruginous on the inner side; marginal lunules blackish; orbicular and reniform mark black, the latter enclosed in a large irregular blackish ringlet: hindwings cinereous, with a broad brownish border. Palpi whitish beneath, striped with black on the side.

"Expanse 18 lines."

PLOTHEIA ORBICULARIS.

Diomea orbicularis, Walker, Catal. Lep. Het. B. M. xv. p. 1804 (1856), ♀.

"Female. Blackish-brown; brownish-cinereous beneath: forewings irregularly varied with ochraceous speckles; exterior part mostly whitish; lines deep black, undulating, not distinct; reniform mark small, deep black. Palpi cinereous, with blackish bands: hindwings brown; abdomen brown, with two blackish crests towards the base; tarsi with black bands.

"Expanse 10 lines."

PLOTHEIA CHLOROMELLA.

Diomea chloromella, Walker, Catal. Lep. Het. B. M. xv. p. 1804 (1858), ♀.

"Female. Green; brownish-cinereous beneath: forewings with three very diffuse black bands; the third including the green denticulated and undulating submarginal line; interior and exterior lines white, undulating, most remote from each other in the middle; orbicular and reniform marks deep black, the former as a dot, the latter rather larger; fringe blackish: hindwings brown. Thorax with two black bands; abdomen brown; fore tarsi and middle tibiæ with black bands.

"Expanse 10 lines."

PLOTHEIA RUDIVITTA.

Egelesta rudivitta, Walker, Catal. Lep. Het. B. M. xv. p. 1748 (1858), ♀.

"Female. Pale wood colour: forewings with the disc mostly ferruginous-brown; lines brown, denticulated, partly black, very incomplete; a black band near the base, emitting a black discal stripe, which extends nearly to the middle of the exterior

border; marginal lunules dark brown; orbicular and reniform marks hardly visible: hindwings cinereous-brown. Thorax speckled with dark brown.

"Expanse 12 lines."

Family CATEPHIIDÆ.

Imago of moderate size, rarely large: hindwings generally less squamose or semi-hyaline at the base. Thorax much crested, abdomen slightly crested; frontal tuft prominent; antennæ long.

Genus ARCTE.

Arcte, Kollar, Hügel's, Kaschmir, iv. p. 477 (1844).
Cocytodes, Guénee, Noct. iii. p. 41 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1122.

Wings rather broad, very robust: forewing elongated, almost straight along the costa, angular at the apex, exterior margin oblique, scalloped, posterior margin convex towards the base; cell extending two-fifths the length; first subcostal emitted at more than one-half before end of the cell, second at one-fourth, trifid, third at one-third from base of second, and fourth at one-third from base of third, fifth from end of the cell, curved upward and joined by a short spur to the third close to its base; discocellular bent acutely inward in the middle, radials from upper end and close to lower end; middle median from angle near end of the cell, lower at one-half before the end; submedian slightly curved from the base: hindwing short, broad, apex almost angular, exterior margin very oblique, scalloped, slightly angular at end of lower median and submedian veins; cell short, extending to one-third the length; two subcostals from end of the cell; discocellular slightly concave, almost bent in the middle, radial from near lower end; two upper medians from end of the cell, lower at one-fifth before the end; submedian and internal vein recurved. Body large, broad, depressed, thorax densely clothed with adpressed woolly scales, abdomen woolly, in the male the sixth segment with a small dorsal black nude scabrous horny plate; palpi stout, coarsely squamose, ascending to level of the eyes, third joint short, thick, conical; antennæ stout, simple; legs stout, densely clothed, all the tibiæ and tarsi with strong lateral spines, middle and hind tibiæ with long stout spurs.

(*Type*, A. polygrapha.)

ARCTE CÆRULEA.

Cocytodes cærulea, Guénee, Noct. iii. p. 41, pl. 13, fig. 10 (1852).

Forewing purplish ferruginous-brown, very sparsely speckled with minute blue-grey scales; crossed by an outwardly-oblique black basal and a subbasal waved line, and an inwardly-oblique angular discal pale-bordered sinuous line; between the basal and subbasal lines is a confluent broad blackish waved fascia, a paler waved fascia

also crossing the middle area which is also longitudinally clouded with blackish-brown; beyond the discal line is a broad angular blackish fascia, and a shorter marginal fascia, the two fasciæ divided by a pale lunular line; a marginal row of black dentate lunules; orbicular spot black, punctiform, reniform mark pale ferruginous, and black streaked: hindwing purplish blackish-brown, somewhat ashy-grey brown towards the base, with a large pale blue discocellular spot and a small contiguous spot near abdominal margin, a similar coloured broad recurved discal band, and a narrow subanal marginal band. Thorax, head, palpi, and legs above reddish-ferruginous; abdomen ashy-grey brown above; thorax and base of abdomen beneath whitish; tarsi blackish with pale ferruginous bands.

Expanse, ♂ $2\frac{5}{8}$, ♀ $3\frac{1}{8}$ inches.

ARCTE TAPROBANA (Plate 160, Fig. 1).

Forewing dark olivaceous ænescent-brown; crossed by outwardly-oblique basal and subbasal ferruginous-bordered black sinuous partly confluent bands, with a black costal dot between the first and second; an outwardly curved discal lunular black line, followed by a contiguous less distinct lunular fascia and a broad shorter marginal fascia, the latter traversed by a row of cupreous-red dentate spots; a prominent marginal row of black oval spots bordered by cupreous-red; within the middle area and contiguous to the discal line is a parallel ferruginous-brown lunular fascia; a small black punctiform orbicular spot, and a short broad black-streaked reniform mark: hindwing ænescent-black, ashy greyish-brown towards the base; traversed by three interrupted anal series of small greyish-blue dentate spots; cilia towards the apex tipt with white. Thorax, head, palpi, and legs above dark ferruginous-brown; palpi beneath, pectus, and legs beneath ferruginous-yellow; tarsi black with pale bands; abdomen above ashy greyish-brown, tip pale ferruginous; abdomen beneath blackish with whitish segmental spots.

Expanse $2\frac{6}{8}$ inches.

Genus CATEPHIA.

Catephia, Ochsenheimer, Schmett. Eur. iv. p. 94 (1816); Hübner, Verz. bek. Schmett. p. 260; Guénée, Noct. iii. p. 43; Walker, Catal. Lep. Het. B. M. xiii. p. 1124.

Wings moderately broad; forewing elongated, costa straight, rounded at the apex, exterior margin slightly oblique and convex, scalloped; cell long, narrow, extending three-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-fifth before the end, trifid, third at one-eighth from base of second, and fourth at two-thirds from base of third, fifth from end of the cell, slightly touching the third near its base; discocellular bent inward in the middle, radials from upper and near lower end; middle median from angle close to end of the cell, lower at one-third; submedian curved from the base: hindwing short, apex very convex,

exterior margin oblique, scalloped; cell extending two-fifths the length; two subcostals from end of the cell; discocellular bent in the middle, radial from near lower end; two upper medians from end of the cell, lower at one-fifth; submedian and internal vein slightly recurved. Body stout, abdomen crested; palpi ascending, rather long, narrow, laxly squamose, second joint reaching above the eyes, third joint linear, obtuse at the tip, two-thirds the length of second; antennæ very minutely pectinated; legs stout, pilose, spurs stout. *Type*, C. alchymista.

CATEPHIA LINTEOLA (Plate 159, Fig. 1, ♀).

Catephia linteola, Guénee, Noct. iii. p. 44 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1126 (1857).

Male: forewing dark ferruginous-brown; crossed by a black basal, subbasal, and a medial erect duplex zigzag line, a more distinct recurved discal sinuous line, a pale submarginal sinuous fascia, and a distinct marginal line; a black orbicular dot and reniform spot, the latter enclosed by a black ring; a black ring-mark also below the reniform; the transverse area between the discal and subbasal lines and also of the lower outer border suffused with dusky brown: hindwing dusky brown, with a broad white transverse medial band ending above anal angle; a small white costal spot, and a slender subanal streak; cilia bordering the apical spot white. Thorax, head, palpi, and legs dark ferruginous-brown, abdomen dusky brown. Female: forewing with the transverse area between the subbasal and discal lines, and the lower posterior border, blackish; the basal and apical area also with darker fascia between the lines: hindwing darker than in male. Thorax, head, palpi, and legs blackish, grey speckled; abdomen also darker, with blackish basal crests.

Expanse $2\frac{1}{4}$ inches.

Genus MELIPOTIS.

Melipotis, Hübner, Verz. bek. Schmett. p. 260 (1818-25).
Ercheia, Walker, Catal. Lep. Het. B. M. xiii. p. 1107 (1857).

Male: forewing elongated, rather broad, costa arched at the end, angular at the apex, exterior margin very oblique, convex, scalloped, posterior margin convex in the middle; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, the third at one-sixth from base of the second, and fourth at two-thirds from base of third, fifth from end of the cell, and slightly touching third near its base; discocellular inwardly oblique, concave, bent close to each end, radials from the angles; middle median from close to end of the cell, lower at nearly one-half before the end; submedian deeply curved from the base: hindwing short, broad, apex and exterior margin convex, scalloped; cell extending to two-fifths the length; two subcostals from end of the cell; discocellular outwardly oblique, concave, radial from lower end; two upper medians from extended

end of the cell, lower at one-fourth before the end; submedian and internal vein straight. Body stout, abdomen crested at the base; palpi ascending, rather slender, second joint reaching to level of the eyes, laxly squamose, third joint long, slender, linear, compressed, three-fourths length of the second; antennæ simple; legs moderately slender, femora pilose beneath, tibiæ laxly clothed, middle and hind tibiæ with long spurs.

Type, M. Cyllaria.

MELIPOTIS CYLLARIA (PLATE 157, FIG. 3).

Phalæna Noctua Cyllaria, Cramer, Pap. Exot. iii. pl. 251, fig. C, D (1782), ♀.
Melipotis Cyllaria, Hübner, Verz. bek. Schmett. p. 260 (1818-25).
Achæa Cyllaria, Guénee, Noct. iii. p. 249; Walker, Catal. Lep. Het. B. M. xiv. p. 1397.

Male and female: forewing ferruginous-brown, sparsely speckled with minute black scales; with a more or less distinct transverse outwardly-oblique basal and an antemedial black zigzag line, and two discal very convex contiguous lines, the latter sinuous at their lower ends, followed by a pale-bordered submarginal lunular line; a black streak between the outer veins, the streak most distinct below the apex; an indistinct small black orbicular spot and a paler lined reniform mark; some black streaks on the disc, a more or less indistinct violet-brown streak bordering the antemedial line, an angular fascia across the middle, and a costal patch before the apex: hindwing blackish-brown, with three lower discal white spots, and a cinereous-white costal spot, also a very narrow short subapical white band, the cilia opposite the band and from anal angle also white. Body dark ferruginous-brown; tegulæ black streaked; palpi and tarsi with blackish bands.

Expanse, ♂ $1\frac{6}{8}$, ♀ $1\frac{7}{8}$ inch.

MELIPOTIS CYLLOTA (PLATE 157, FIG. 2, ♀).

Achæa Cyllota, Guénee, Noct. iii. p. 248 (1852).
Achæa signivitta, Walker, Catal. Lep. Het. B. M. xiv. p. 1398 (1858).

Male and female. Pale violaceous ochreous-brown; with an obsolescent transverse zigzag duplex line, and a curved discal sinuous duplex line, followed by a pale ochreous sinuous submarginal line; a black punctiform orbicular spot, and an ill-defined brown-lined reniform mark, the latter sometimes being entirely black; a broad black interrupted streak from the apex, and a prominent longitudinal blackish-streaked fascia from base of the wing to posterior margin: hindwing blackish-brown, with three lower discal white spots, a narrow white subapical band, the cilia opposite the band and from the anal angle white. Body violaceous ochreous-brown; palpi and tarsi with dark brown bands.

Expanse, ♂ $1\frac{3}{4}$, ♀ $2\frac{1}{8}$ inches.

MELIPOTIS DIVERSIPENNIS (Plate 157, Fig. 1).

Ercheia diversipennis, Walker, Catal. Lep. Het. B. M. xii. p. 1108 (1857), ♀.
Melipotis ambidens, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 116, fig. 9 (1874).

Male and female: forewing pale violaceous ochreous-brown, slightly darker clouded from middle of the costa and at the apex; the veins very slenderly black lined, and with a slender black streak between the outer veins, the latter streaks being most prominent between the subcostal branches, lower medians and submedian, the submedian streak extending to base of the wing, and the two last being bordered by a lower parallel broader streak, a similar broad streak also extending below the submedian; across the disc are some faint traces of black zigzag lines, which are bent inward to the costa from the lower radial, and are most conspicuous at their posterior end; marginal row of black dots minute: hindwing blackish-brown, cinereous-brown at the base; with a dark inner bordered angulated discal transverse whitish band, a narrow short white subapical marginal band, and another near the anal angle, the latter with a round contiguous upper spot, the bordering cilia of both being also white. Body violaceous ochreous-brown; collar, tegulæ, and abdominal crests black streaked; palpi with black bands, fore tibiæ with slight black bands.

Expanse $1\frac{5}{8}$ to $1\frac{7}{8}$ inch.

MELIPOTIS FUSIFERA.

Achæa fusifera, Walker, Catal. Lep. Het. B. M. xiv. p. 1398 (1858).

Male and female: forewing ferruginous-brown, with a broad violet-black anterior band, curving from base of the costa across the disc and upward to the apex; base of the band crossed by black sinuous lines, and the apex traversed by black streaks; a pale-bordered punctiform orbicular spot, and indistinct reniform mark; exterior border with some black speckles and a submarginal pale waved lunular line, posterior border also black speckled and with sinuous streaks near the angle: hindwing blackish-brown, with three lower discal white spots; subapical and anal narrow interciliary band and cilia white. Body dark ferruginous-brown, palpi and legs with blackish bands.

Expanse, ♂ $1\frac{7}{10}$, ♀ 2 inches.

MELIPOTIS PANNOSA (Plate 157, Fig. 4, ♂).

Ercheia pannosa, Moore, Proc. Zool. Soc. 1883, p. 24.

Male and female: forewing pale violaceous ochreous-brown; with a violet-black costal basal triangular patch, and an irregular pale-bordered apical patch, a medial transverse obsolescent slender brown sinuous fascia and a curved discal sinuous line, followed by a whitish submarginal line; orbicular spot punctiform, black; reniform mark ochreous-grey and brown lined; below the latter are some irregular brown

streaks: hindwing blackish violet-brown, with three white lower discal spots, sub-apical band and adjoining ciliæ, and the ciliæ from anal angle. Body violaceous ochreous-brown; palpi, and tarsi with blackish bands.

Expanse $1\frac{1}{2}$ to 2 inches.

Genus ANOPHIA.

Anophia, Guénee, Ann. Soc. Ent. Fr. x. p. 81 (1841); Noct. iii. p. 45 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1126 (1857).

Catephia (part), Ochsenheimer; Boisduval; Duponchel.

Ædia (part), Hübner, Verz. bek. Schmett. p. 260 (1818-25).

Male: forewing elongated, costa almost straight, rounded at the apex, exterior margin oblique, slightly scalloped, posterior margin much recurved, very convex and fringed near the base, cilia extending beyond the posterior angle; cell extending to more than half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-sixth from base of second, and fourth at one-third from base of third, fifth from end of the cell, curved upward and joined to the third for a short distance near its base; discocellular outwardly oblique, concave, radials from upper end and near lower end: middle median from angle at end of the cell, lower at one-fourth before the end; submedian very slightly recurved: hindwing short, broad, apex and exterior margin convex, slightly scalloped; cell extending nearly half the length; two subcostals from end of the cell; discocellular slender, obliquely concave, radial from near lower end; two upper medians from end of the cell, lower at one-fifth before the end; submedian and internal vein straight. Body moderately stout; thorax and base of abdomen slightly crested, abdomen tufted at apex; palpi ascending, reaching to level of the vertex; second joint narrow, laxly squamose beneath, third joint lanceolate, half length of the second; antennæ minutely pectinated; legs stout, femora slightly fringed beneath, tibiæ clothed with strong hairy scales.

(*Type*, A. leucomelas).

ANOPHIA OLIVESCENS.

Anophia olivescens, Guénee, Noct. iii. p. 48, pl. 14, fig. 11 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1128 (1857).

Forewing olivaceous greyish-black; crossed by two subbasal and two antemedial greyish-bordered black sinuous outwardly-oblique lines, and two discal inwardly oblique more acutely sinuous lines, the outward line of each being the most distinct; beyond is an outer discal broader line, a more distinct submarginal denticulated line, and a marginal lunular line; orbicular mark composed of a black ring, and reniform of a black ring with purplish-white centre, the reniform encompassed in a

large more or less prominent purplish-white brown-speckled triangular costal patch; below the orbicular is also a black ringlet mark: hindwing white, with a broad blackish outer band bordered by a narrow white subapical and subanal spot; the cilia bordering the spots being also white. Thorax, head, palpi, and legs olivaceous greyish-black; abdomen cinereous-brown, dorsal tufts blackish in male, ferruginous in female; anal tuft blackish; tarsi with black and pale bands.

Expanse $1\frac{4}{10}$ to $1\frac{5}{10}$ inch.

ANOPHIA DIPHTEROIDES (Plate 159, Fig. 6, ♀).

Male and female: forewing dull olive-grey; crossed by two basal sinuous incomplete black lines, an entire antemedial line, two discal and a submarginal denticulated line, followed by a marginal dentated lunular line; an oval black orbicular ringlet mark, and an irregular-shaped reniform mark, the reniform mark being continued upward to the costa, and the orbicular joined beneath to a larger black ring mark: from the lower ringlet a short blackish streak extends to the discal line; all the markings edged with white speckles, and the costal end of the markings dilated and almost confluent; cilia alternated with greyish-black and white: hindwing with white basal medial area; the costal border and broad outer band black; cilia below the apex, before anal angle, and on abdominal margin also white. Thorax, head, and palpi olivaceous greyish-white; collar and tegulæ black streaked; palpi with black bands; legs with black bands, abdomen greyish-brown, tip blackish.

Expanse $1\frac{4}{10}$ to $1\frac{5}{10}$ inch.

Genus MOSARA.

Mosara, Walker, Catal. Lep. Het. B. M. v. p. 1032 (1855).

Male: forewing rather short and broad; costa slightly arched at the base, apex not acute, exterior margin slightly oblique, very convex hindward and at the angle, posterior margin very convex at the base; cell extending to half the length; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, trifid, third at one-fifth from base of the second and fourth at one-third from base of the third, fifth from end of the cell and slightly touching the third near its base; discocellular concave, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at one-third; submedian much recurved: hindwing short, rounded externally, distorted, folded longitudinally in a recurved line from the base to exterior margin; the costa beneath with a subbasal tuft of raised scales, and with a band of raised scales extending from middle of the costa obliquely across the disc to exterior margin above the fold; cell extending to one-third the length; two subcostals from end of the cell; discocellular very slender, outwardly oblique, radial from near lower end; two upper medians from end of the cell, lower

at one-third; submedian and internal vein straight. Body moderately stout; palpi stout, ascending, coarsely squamose, second joint reaching level of the eyes, third joint one-third its length, elongate-conical; antennæ broadly bipectinated to near the tip; legs rather stout, pilose, spurs long. Female. Wing of normal shape; veins as in male; antennæ setose.

MOSARA APICALIS (Plate 159, Fig. 3, 3*a*, ♂ ♀).

Mosara apicalis, Walker, Catal. Lep. Het. B. M. v. p. 1032 (1855), ♂.
Anophia lateralis, Walker, *id.* xxxiii. p. 917 (1865), ♀.

Male: forewing violet greyish-brown, crossed by an indistinct subbasal and an antemedial outwardly-oblique undulated blackish line, two inwardly-oblique discal sinuous lines, followed by a contiguous prominent angular purplish-grey line, and a similar but more irregular line, the two last lines having intervening black spots at the costal end and in the middle; orbicular and reniform marks very indistinct; a short black longitudinal streak above base of submedian; the area immediately bordering the discal pale line, and also that of the antemedial line below the cell, is of a darker shade: hindwing pale violaceous cinereous-brown, and whitish-cinereous towards the lower base. Thorax, head, palpi, and legs violet-brown; tarsi with black bands; abdomen violaceous cinereous-brown. Female: forewing of the same colour and markings as in male, the fascia bordering the antemedial line below the cell, and of the discal line being more prominently defined: hindwing violaceous cinereous-brown, with the lower basal area cinereous-white.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{2}{10}$ inch.

Genus VAPARA.

Vapara, Moore, Desc. Lep. Coll. Atk. p. 163 (1882).

Forewing comparatively broad, exterior margin even, posterior margin convex in the middle; first subcostal emitted at one-third before end of the cell, second bifid, emitted at one-fifth; fourth also bifid, emitted from end of the cell, curving upward and touching third near its base, the fifth being thrown off above end of the cell and just below the point of juncture; discocellular slightly oblique and convex, upper radial from end of the cell in a line with subcostal, lower radial and upper median from slight angles above end of the cell, middle median close to its end, lower at one-third before the end; submedian slightly curved: hindwing short, broad; costal vein straight; two subcostals from end of the cell; discocellular slightly oblique and convex, radial from near its lower end; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein nearly straight. Body moderate, abdomen of male extending beyond hindwing, anal

appendages tufted; tibiæ compactly pilose; palpi porrect, laxly squamose, stouter and shorter than in *Erygia*; antennæ minutely pectinate in male. Allied to Erygia.

Type, V. fasciata.

VAPARA INDISTINCTA (Plate 159, Fig. 7, ♂).

Vapara indistincta, Moore, Desc. Lep. Coll. Atk. p. 163 (1882).

Forewing brownish-ochreous, with two indistinct transverse basal, two medial, and two discal slender dusky brown sinuose-lunular bands, and a marginal row of points; a dusky brown orbicular dot and pale centred reniform mark of dusky brown dots: hindwing pale ochreous-brown. Body brownish-ochreous, front of thorax and bands on forelegs ochreous-brown.

Expanse, ♂ 1⅛, ♀ 1⅝ inch.

Genus STICTOPTERA.

Stictoptera, Guénee, Noct. iii. p. 51 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1130.
Steiria, Walker, Catal. Lep. Het. B. M. xiii. p. 1135 (1857).

Male: forewing long, narrow, costa straight, slightly acuminate at the tip, exterior margin very oblique, denticulated, posterior margin short, recurved; cell long, narrow, extending nearly three-fifths the length; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, trifid, third at one-fifth from base of second, and fourth at three-fifths from base of third, fifth from end of the cell, curved upward and joined for a short distance to the third near its base; discocellular slightly concave, radials from each end; middle median from close to end of the cell, lower at one-fourth; submedian slightly recurved: hindwing short, broad, basal area semi-transparent, apex convex, exterior margin oblique, convex; cell extending to less than half the length; two subcostals from end of the cell; discocellular slightly concave, radial from lower end; two upper medians from extreme end of the cell, lower at one-fourth before the end; submedian and internal vein slightly recurved. Thorax large, stout, with two more or less high vertical crests in front, composed of long spatular scales; abdomen broad at the base, tapering to the tip, slightly crested; palpi long, slender, porrect, squamose, second joint extended beyond the head, third joint linear, two-thirds the length of second; antennæ long, slender, slightly pectinated; legs long, slender, slightly pilose, spurs very long.

STICTOPTERA VARIABILIS (Plate 159, Fig. 5, ♂).

Steiria variabilis, Moore, Desc. Lep. Coll. Atk. p. 164 (1882).

Male. Forewing dark ferruginous-brown, with an indistinct greyish-brown duplex zigzag streak extending upward from base of posterior margin to the costa,

the space between it and the lower part of the cell more or less dark black; a recurved discal lunular similar duplex line, and a dusky brown-bordered submarginal zigzag fascia, the latter longitudinally streaked with black below the apex; a marginal row of grey bordered black lunules; an indistinct black streak at base of the costa; an orbicular spot and reniform mark of raised black scales: hindwing semitransparent, pale purplish bluish-white, with broad dusky black marginal band. Body dark brown, thoracic crest fringed with black, base ochreous.

VARIETY. With the markings less distinct, the ground colour dusky black, the portion of the markings on posterior border and before the apex bordered with pale ochreous.

Female brownish-ochreous, brightest on basal area, with black longitudinal streaks from base, the lines on posterior margin indistinct, the discal area from middle of costa to below the apex dusky black, the streaks at apex and posterior angle bordered with ochreous. Body ochreous.

Expanse $1\frac{5}{8}$ inch.

STICTOPTERA SUBOBLIQUA (PLATE 159, FIG. 4, 4*a*, 4*b*, ♂ ♀, larva).

Steiria subobliqua, Walker, Catal. Lep. Het. B. M. xiii. p. 1136 (1857).

Male: forewing pale purplish greyish-ochreous, with purplish-brown costal streaks, of which the antemedial and apical are large, the apical being also streaked with black; a similar coloured posterior band with irregularly angulated inner border, extending from base of wing to middle of exterior margin, and which contain traces of black transverse sinuous lines; below the cell is a black streak extending from the base to lower median vein: hindwing purplish-white, semi-diaphanous, with broad, blackish-brown outer band; cilia white. Body purplish greyish-ochreous; middle and front of thorax, head, palpi, and forelegs purplish-brown; middle and hind legs greyish-ochreous; tarsi with brown bands.

Female: forewing pale purplish-ochreous, basal half darkest and defined by an oblique transverse waved slender medial black line; crossed by some indistinct basal, medial, and discal sinuous blackish lines, the outer lines being most distinct hindward; a marginal row of black lunular points; some incomplete black streaks from the apex; orbicular and reniform marks indistinctly defined by pale bordered black raised scales, the raised scales extending to outer margin: hindwing as in male. Thorax with a black streak in front.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{1}{8}$ inch.

Larva with sixteen legs; dusky olive-green; head and anal segments yellowish; third to sixth segment ochreous above; with a dusky brown dorsal and subbasal bands, and a sublateral row of black spots. Pupa dull purplish-red.

"Feeds on Garcinia." (*Dr. Thwaites.*)

STICTOPTERA TRAJICIENS (Plate 158, Fig. 12).

Steiria trajiciens, Walker, Catal. Lep. Het. B. M. xiii. p. 1137 (1857), ♂.

Male: forewing purplish greyish-brown, the basal half traversed by pale-centred zigzag black duplex lines longitudinally disposed between the veins; outer border also traversed by similarly disposed acutely sinuous lines, with white and black angles, followed by a whitish bordered lunular marginal line; the discal interspace crossed by three or four black waved lines, the inner line crossing the reniform mark of black raised scales: hindwing semihyaline, brownish-white, with a broad dusky brown marginal band; cilia white. Thorax, head, palpi, and forelegs above purplish greyish-brown; thorax black streaked; abdomen cinereous-brown, crests blackish; tarsal bands dark brown.

Expanse $1\frac{4}{10}$ inch.

Genus ÆGILIA.

Ægilia, Walker, Catal. Lep. Het. B. M. xiii. p. 1138 (1857).

Forewing long, narrow, triangular, costa slightly arched towards the end, apex pointed, exterior margin very oblique, convex, and sinuous; cell extending nearly three-fifths the length; first subcostal emitted at one-half before end of the cell, second at about one-fourth, trifid, third at one-third from base of second, and fourth at one-half from base of third, fifth from end of the cell and joined to third near the base; discocellular inwardly oblique, concave, radials from upper and lower end; middle median from angle near end of the cell, lower at one-fourth; submedian recurved: hindwing short; cell nearly half the length; two subcostals from end of the cell; discocellular concave, radial from the lower end; two upper medians from end of the cell, lower at about one-fifth; submedian and internal vein nearly straight. Body extending half length beyond hindwings; palpi obliquely ascending, reaching to the vertex, laxly squamose, second joint narrow, third lanceolate, two-thirds the length of second; antennæ simple; legs long, laxly squamose, spurs long.

ÆGILIA DESCRIBENS.

Ægilia describens, Walker, Catal. Lep. Het. B. M. xiii. p. 1139 (1857).

"Fawn colour, darker beneath: forewings with transverse oblique zigzag brown lines, which are almost obsolete on the interior side of the reniform spots; the border of the latter is mostly whitish-testaceous, and there is a blackish dot between its exterior side and the costa; zigzag submarginal line and marginal streaks whitish-testaceous; marginal lunules elongated, dark brown: hindwings greyish, vitreous, with a broad cupreous-brown border.

"Expanse 18 lines."

Genus LOPHOPTERA.

Lophoptera, Guénee, Noct. iii. p. 54 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1132 (1857).

Forewing long, narrow, costa slightly arched towards the end, apex acute, exterior margin oblique, slightly convex, posterior margin recurved; cell long, narrow; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell; discocellular obliquely concave, radials from upper and lower end; middle median from angle close to end of the cell, lower at one-third before the end; submedian much curved from the base: hindwing short, broad, exterior margin convex; cell less than half length of the wing; discocellular slightly bent in the middle, radial from lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein slightly recurved. Body moderately stout; palpi porrect, second joint roughly squamose, reaching half length beyond the eyes, third joint short, almost conical, half length of the second; antennæ simple; legs rather long, tibiæ clothed with stout hairy scales, spurs long.

LOPHOPTERA COSTATA (Plate 159, Fig. 8).

Forewing with a dark purplish-brown band extending along the costal border from the base to the apex, the area from the band to posterior margin being pale purplish brownish-grey and almost greyish-white along the lower border of the costal band; the lower area of the wing is also crossed by a basal, a subbasal, a medial, two discal, and a submarginal grey-bordered dark brown lunular line, followed by a marginal row of similar coloured linear spots; a dark brown spot also situated below the cell: hindwing dark purplish-brown, almost black externally, the discal area and below the cell more or less semitransparent and crossed by the dark veins. Thorax dark purplish-brown, abdomen blackish; palpi, and legs dark purplish-brown.

Expanse $1\frac{4}{10}$ inch.

Genus GYRTONA.

Gyrtona, Walker, Catal. Lep. Het. B. M. xxvii. p. 89 (1863).

Forewing long, narrow; apex obtuse, exterior margin oblique and slightly convex, posterior margin convex at the base; cell extending to about two-fifths the length; first subcostal emitted at one-third before end of the cell, second at one-sixth, trifid, third at one-fourth from base of second, and fourth at one-half from base of third; fifth from end of the cell and joined to third for a short distance beyond its base; discocellular obliquely concave, slender, radials from upper and lower end; middle median from close to end of the cell, lower at one-fourth; submedian much recurved from the base: hindwing broad; apex very convex, exterior margin much undulated; cell broad, extending to half the length; two subcostals from end of the

cell; discocellular inwardly concave, radial from lower end; middle median from near end of the cell, lower at one-third; submedian and internal vein slightly curved. Body moderately stout; head with a decumbent tuft in front; palpi porrect, squamose, second joint projecting beyond the eyes, third joint short, thickish, obtuse; antennæ long, finely ciliated in male, setose in female; legs long, slender, squamose, spurs long.

GYRTONA THORACICA.

Gyrtona thoracica, Walker, Catal. Lep. Het. B. M. xxvii. p. 96 (1863), ♀.

"Female: forewings hoary; testaceous tinged, minutely black-speckled; with some blackish dentate partly ferruginous lines; a very broad band near the base, and a large patch by the interior angle chalybeous-blackish, the latter forming a submarginal band which includes a cinereous denticulated line; discal mark blackish, elongated, oblique; marginal lunules blackish: hindwings æneous-cinereous, very slightly hyaline. Tegulæ of the thorax blackish towards the tip.

"Expanse 12 lines."

GYRTONA MUSCOSA.

Diomea muscosa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 898 (1865).

"Male. Grass-green: forewings speckled with brown; exterior border mostly brown, with green speckles, which form irregular denticulated lines: reniform mark dark brown, indistinct: hindwings and abdomen reddish-cinereous. Thorax mostly brown, green in front. Female: forewings olive-green, speckled with black, darker towards the exterior border, with black denticulated lines; a blackish band between the interior and exterior lines, and a broad oblique blackish streak by the interior angle.

"Expanse 12 to 14 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

GYRTONA HYLUSALIS.

Gyrtona Hylusalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 93 (1863), ♀.
Gyrtona nigrocinerea, Walker, *id.* p. 94, ♂.
Gyrtona dorsifascialis, Walker, *id.* p. 95, ♀.
Gyrtona strenualis, Walker, *id.* p. 96, ♀.
Gyrtona monilialis, Walker, *id.* p. 97, ♀.
Nephopteryx demptella, Walker, *id.* xxxv. p. 1721 (1866).

Male. Cinereous-brown. Female violaceous-brown: forewing minutely brown-speckled, mostly purplish-cinereous in front, mostly pale cinereous hindward; an antemedial, a postmedial, and a submarginal black, transverse, slight, undulating and denticulated lines; a looped black line extending from the costa between the

second and third lines; marginal points blackish, elongated: hindwing brown; cilia edged with cinereous-white. Thorax, head, palpi, and legs above cinereous-brown; collar dark brown.

Expanse $\frac{3}{4}$ inch.

GYRTONA DORSALIS (Plate 158, Fig. 10, 11, ♂ ♀).

Gyrtona dorsalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 98 (1863), ♂.
Othora subfasciata, Walker, *id.* xxxiii. p. 907 (1865), ♂.
Othora includens, Walker, *id.* p. 909, ♂.
Ariola bryophilina, Felder and Rogen. Nov. Voy. Lep. v. pl. 120, fig. 10 (1874) ♀.

Male: forewing pale violaceous brownish-cinereous; with indistinct transverse basal and antemedial blackish cinereous-bordered undulated denticulated lines, a similar postmedial, discal, and a submarginal line, the two latter with black patches near the posterior angle; a marginal row of slender lunules; a pale-bordered black orbicular spot, and a large violet-brown bordered reniform mark of raised scales: hindwing cinereous-brown; cilia edged with cinereous-white. Thorax, head, palpi, and legs violaceous-brown, black-speckled; tarsi with black bands. Female: forewing cinereous, brown speckled; with more distinct transverse basal lines, and sometimes with a broad antemedial brown band; the discal and submarginal lines also more distinct: hindwing and abdomen paler. Thorax brownish-cinereous, with a broad brown collar in front; legs cinereous, with dark brown bands.

Expanse, ♂ ♀ $1\frac{1}{4}$ inch.

GYRTONA PHYCISOÏDES (Plate 158, Fig. 8, ♀).

Female: forewing pale purplish cinereous-white, slightly violet-brown speckled; crossed by an incomplete violet-brown subbasal costal fascia, a medial erect sinuous line, a recurved discal denticulated line, and two broader sinuous submarginal lines, followed by a marginal lunular line; a black spot above the posterior margin between the antemedial and medial lines, and another spot between the latter and the discal line; orbicular and reniform marks composed of a black dot: hindwing cinereous-white, with a pale cinereous-brown outer border. Thorax, head, palpi, and legs cinereous-white; thorax with a black-speckled collar; legs with brown tarsal bands; abdomen pale cinereous-brown.

Expanse $\frac{3}{4}$ inch.

Family HYPOCALIDÆ.

Wings of moderate size: hindwings gaily coloured; palpi thick, prominent, rostriform, closely applied together, joints indistinct.

Larva cylindrical, thick, with sixteen legs.

Genus HYPOCALA.

Hypocala, Guénee, Noct. iii. p. 73 (1852); Walker, Catal, Lep. Het. B. M. xiii. p. 1173.
Parthenos (part), Hübner, Verz. bek. Schmett. p. 278.

Forewing elongated, triangular, exterior margin scalloped; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, third at one-fifth from base of second, and fourth at two-thirds from base of third; fifth from end of the cell and joined by a short spur to the third near its base; discocellular concave, slightly bent close to each end, radials from the angles; middle median from angle below end of the cell, lower at two-fifths before the end; submedian slightly curved: hindwing short, broad; apex convex, exterior margin slightly scalloped; two subcostals from end of the cell; discocellular extremely slender, concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein almost straight. Body stout; abdomen fusiform, smooth, thorax thick; head with a projected tuft in front; palpi porrect, very stout, laterally broad and flattened, closely applied together and having the appearance of a short rostrum, third joint short, pointed in front; antennæ minutely pectinated; legs stout, spurs long. (*H. rostrata.*)

HYPOCALA EFFLORESCENS (Plate 160, Fig. 5, 5*a*, larva).

Hypocala efflorescens, Guénee, Noct. iii. p. 77 (1852).

Forewing purplish brownish-cinereous, sparsely speckled with black scales; the costal area broadly covered with pale purplish-brown short, transverse, confluent strigæ, which are more or less apparent in certain lights; with a transverse very indistinct pale purplish-brown basal, an antemedial, and a postmedial zigzag line, the two last lines angled inward and approximated below the cell; a submarginal sinuous whitish line with prolonged black inner points, the line being outwardly bordered from the lower radial to its lower end by a purplish-black lunular streak, which is angulated outward on the middle median; a marginal slender black lunular line; a more or less indistinct small black orbicular spot, and a black reniform mark: hindwing ochreous-yellow, with ænescent-black streaks from the base, a confluent spot at end of the cell, and a broad outer marginal band, the latter with a yellow small subanal indentation; cilia yellow. Thorax, head, palpi, and legs purplish brownish-cinereous, black speckled; tarsi with darker bands; abdomen yellow, with blackish dorsal and lateral bands, the anal segment with a broad band.

Expanse $1\frac{3}{4}$ inch.

Larva with sixteen legs; thick; pale greenish-grey above, green beneath, with two slender subdorsal white lines, and a lateral white band, the latter streaked with yellow anteriorly, and with pink and short black linear spots between the spiracles;

two linear marks also above the anterior and posterior spiracle; head with transverse black lines; middle and hind feet reddish-brown. Pupa ferruginous-brown.

"Feeds on Diospyros." (*Dr. Thwaites.*)

HYPOCALA ANGULIPALPIS (Plate 160, Fig. 4, ♂).

Hypocala angulipalpis, Guénee, Noct. iii. p. 77 (1852).

Male: forewing pale brownish-cinereous, sparsely speckled with indistinct black scales; an obsolescent transverse antemedial, and a postmedial zigzag brownish line, a more or less prominent blackish streak below base of the cell, and a transverse submarginal pale ochreous-bordered angulated line with a contiguous outer purplish-brown lunular line; a slender black marginal line; a black more or less indistinct orbicular spot and reniform mark; the costal area from base to the obsolescent discal line beyond the reniform mark more or less pale ochreous: hindwing ochreous-yellow, with ænescent-black streaks from the base, a broad confluent spot at end of the cell, and an irregularly-angulated outer band which is excavated and disconnected from the margin for some distance from the anal end; cilia yellow. Thorax, head, palpi, and legs brownish-cinereous, legs with darker bands; abdomen yellow, with dorsal black bands.

Expanse $1\frac{3}{10}$ inch.

Family CATOCALIDÆ.

Imago with ample, broad wings: hindwing gaily coloured and with dark bands. In repose the wings form a very flat roof. Antennæ long; thorax and abdomen slightly crested.

Larva with sixteen legs, looping the anterior segments when walking; elongated, flattened beneath; with lateral fleshy filaments above the legs. Pupa generally efflorescent, enclosed in a slight cocoon of silk spun amongst leaves or bark. (*Stainton.*)

Genus CATOCALA.

Catocala, Schrank, Fauna Boica, ii. 2, p. 158 (1802); Ochs. Schmett. Eur. iv. p. 94; Guénee, Noct. iii. p. 80; Walker, Catal. Lep. Het. B. M. xiii. p. 1179.

Wings ample: forewing elongate, trigonate; costa arched, apex obtusely pointed, exterior margin oblique, scalloped, posterior margin convex at base; cell extending half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, fifth from end of the cell and touching third close to its base; discocellular bent near each end, concave in middle, radials from the angles; middle median from angle close to end of the cell, lower at two-fifths; submedian slightly recurved: hindwing broad, exterior margin convex, scalloped, angular at end of the submedian; cell extending two-fifths the length; two subcostals from

end of the cell; discocellular very obliquely concave, radial from near lower end; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal slightly curved. Body stout; palpi slightly ascending, stout, coarsely squamose, second joint thick, of uniform width, third joint thick, short, cylindrical; antennæ long, minutely pectinated; legs stout, fore tibiæ pilose beneath, middle femora fringed beneath, with inner rows of short spines above, hind legs slightly pilose, tibiæ spined; tarsi long. (*Type*, C. Fraxini.)

CATOCALA RAMA (Plate 160, Fig. 6).

Forewing violaceous-grey, numerously speckled with violet-brown scales; crossed by a dark violet-brown short basal costal zigzag line, two antemedial narrow zigzag bands, and a prominent black slender discal sinuous line with outwardly prolonged points above and below the lower radial; veins within the medial area and beyond the discal line also black; a broad violet-brown fascia across the medial area, another beyond the discal line, and a third on the marginal border; a greyish-white black-speckled broad reniform mark: hindwing ochreous-yellow, with a narrow transverse curved short medial blackish band, and a broad marginal band, with a narrow pale ochreous subapical and a subanal marginal streak; cilia white. Thorax, head, palpi, and legs violaceous-grey, speckled with brown; front of thorax, and side of palpi dark brown; tegulæ bordered with brown scales; abdomen pale brown; tip of fore tibiæ, and also the tarsi with black bands.

Expanse $2\frac{3}{8}$ inches.

Genus BLENINA.

Blenina, Walker, Catal. Lep. Het. B. M. xiii. p. 1214 (1857).

Forewing rather short, elliptic, costa slightly arched from the base, apex not acute, exterior margin very moderately oblique, slightly convex, posterior margin rounded towards the base; cell narrow, disposed towards middle of the wing, extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, bifid, fourth from end of the cell, bifid, slightly touching third near its base, the fifth being thrown off from the fourth at some distance from below its juncture with the third; discocellular outwardly oblique, slightly concave, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at two-fifths before the end; submedian arched from the base, extending midway between the median and posterior margin: hindwing short, broad, apex and exterior margin convex, undulated; two subcostals from end of the cell; discocellular outwardly oblique, concave, radial from lower end; two upper medians from extended lower end of the cell, lower from close to the end; submedian and internal vein straight. Body stout, abdomen thick, dorsally crested at the base;

palpi ascending, squamose, second joint long, reaching to level of the eyes, third joint lanceolate, of the same length as the second; antennæ very minutely pectinated; legs stout, femora slightly fringed beneath, tibiæ laxly clothed, spurs long. (*Type*, B. accipiens.)

BLENINA DONANS (Plate 160, Fig. 2).

Blenina donans, Walker, Catal. Lep. Het. B. M. xiii. p. 1215 (1857).

Forewing pale whitish-cinereous, numerously speckled with cinereous-brown scales; with an indistinct transverse basal, and a subbasal inwardly-oblique slender black sinuous line, an outwardly-oblique medial and discal line, followed by a cinereous-brown sinuous fascia, a less distinct blackish sinuous submarginal line, and a marginal row of slender points; the costal end of the lines most prominent and somewhat dilated; a small blackish orbicular and reniform spot; a blackish streak extending obliquely from the reniform mark to exterior margin above the angle: hindwing pale golden-yellow, with a broad golden-brown marginal band; cilia yellow, edged with white in the middle. Thorax, head, palpi, and legs whitish-cinereous; fore tarsi with blackish bands; abdomen pale golden-yellow.

Expanse $1\frac{1}{2}$ inch.

BLENINA ACCIPIENS (Plate 160, Fig. 3).

Blenina accipiens, Walker, Catal. Lep. Het. B. M. xiii. p. 1215 (1857).

Forewing whitish-cinereous, densely speckled with black scales: with a transverse inwardly-oblique subbasal black zigzag line, an outwardly-oblique medial line, a much less distinct similar discal line, a broader distinct submarginal line, and a marginal row of black points; the basal and medial area clouded with brown; a slender black reniform mark: hindwing cupreous-black, with a short discal ochreous-yellow band; cilia ochreous-yellow. Thorax, head, and palpi whitish-cinereous, black-speckled; legs whitish-cinereous, with blackish bands.

Expanse $1\frac{1}{4}$ inch.

Genus AUCHA.

Aucha, Walker, Catal. Lep. Het. B. M. xiii. p. 1137 (1857).

"Male. Wings moderately broad: forewings nearly straight along the costa, almost rectangular at the tips, hardly oblique along exterior border till near the interior angle, where they are moderately oblique. Body moderately stout; palpi short, obliquely ascending; third joint elongate-conical, not more than one-fourth the length of the second; antennæ slender, filiform, very minutely pubescent; abdomen slightly tufted at the tip; legs stout, hind tibiæ with very long spurs."

AUCHA VELANS.

Aucha velans, Walker, Catal. Lep. Het. B. M. xiii. p. 1138 (1857).

"Male. Blackish-brown, cupreous; ferruginous beneath: forewings with a cinereous tinge; all the markings almost obsolete, except a row of blackish marginal dots: hindwing cupreous, somewhat paler towards the base and along the interior border; an oblong fawn-coloured patch in the disc; cilia partly testaceous; underside with a brown discal spot and a brown border. Abdomen cupreous-ferruginous.

"Expanse 16 lines."

Family OPHIDERIDÆ.

Imago large, robust. Wings ample: forewings in some almost hooked at the tip: hindwings generally deep yellow, with black bands. Body stout; thorax and abdomen crested; palpi long, ascending, apex compressed and clavate; antennæ long, thick.

Larva half looped, with sixteen legs, the first middle pair being imperfect and useless for walking; with prominent ocellated spots on sixth and seventh segments. When at rest the anterior and posterior segments are held upward, the anterior segments also being frequently curled beneath. Pupa stout, conical, head truncated; scabrous; amongst growing leaves which are knit together and lined with a silken web; pupa fastened by the tail.

Genus OTHREIS.

Othreis, Hübner, Verz. bek. Schmett. p. 264 (1818-25); Moore, Trans. Zool. Soc. xi. p. 64 (1881).
Corycia, Hübner, Verz. bek. Schmett. p. 265 (1818-25).
Ophideres (part), Guénee; Walker.

Forewing elongated; costa slightly arched near the end, apex acute; exterior margin oblique and slightly convex hindward, even in the male, scalloped in the female; posterior margin short, with a fringed lobe near the base and a slight excavation beyond; costal vein extending to near apex; first and second subcostals at equal distances before end of the cell, second trifid, third forked near the apex, fifth from end of the cell and joined to third near its base; discocellular very slender, recurved, bent near each end, radials from the angles; middle median from angle at end of the cell, lower at one-third before the end; submedian bent near its base, from below the angle of which a short spur is emitted and joins a very slender short lower submedian branch: hindwing broad; costal margin extending beyond angle of forewing, exterior margin convex, and with a slight subanal angle; abdominal margin short; costal vein recurved, extending to apex; two subcostals from end of

the cell; discocellular very slender, deeply concave, radial from near lower end; middle median from angle close to end of the cell, lower one-third before the end; submedian and internal veins straight. Body very robust, densely clothed above; palpi large, long, ascending; second joint clothed with short adpressed hairy scales, third joint slender, long, slightly clavate, and with a slight hairy tuft above; antennæ long, filiform, thickened at the base; fore femora and tibiæ thickly pilose beneath; middle and hind legs less pilose, with spurred tibiæ and spined tarsi.

Type, O. Fullonica.

OTHREIS FULLONICA.

Phalæna Noctua Fullonica, Linnæus, Syst. Nat. ii. p. 812 (1767); Clerck, Icones, pl. 48, fig. 1, 2.
Ophideres Fullonica, Guénee, Noct. iii. p. 111; Walker, Catal. Lep. Het. B. M. xiii. p. 1222.
Othreis Fullonica, Moore, Trans. Zool. Soc. xi. p. 64, pl. 12, fig. 1, 1*a*, pl. 13, fig. 1, 1*a* (1881), ♂ ♀.
Noctua Dioscoreæ, Fabricius, Syst. Ent. p. 593 (1775); Spec. Ins. ii. p. 212; Mant. Ins. ii. p. 137; Ent. Syst. iii. 2, p. 16, ♀.
Phal. Noct. Pomona, Cramer, Pap. Exot. i. pl. 77, fig. C (1779), ♀.
Othreis Pomona, Hübner, Verz. bek. Schmett. p. 264.
Ophideres Cajeta, Walker, Catal. Lep. Het. B. M. xiii. p. 1223, ♀ (*nec* Cramer).

Male: forewing dark ferruginous-brown or vinous-brown, numerously covered with either ochreous, dark olive-green, or greyish strigæ, those on the exterior border forming irregular fasciæ and terminating in a straight streak to the apex; an antemedial and a postmedial oblique transverse darker brown line, the interspace being glossy and generally with transverse purplish-brown fasciæ; a small oval orbicular spot, and the reniform mark being more or less unglossed: hindwing orange-yellow, with a broad black angulose-bordered apical marginal band, and row of pale yellow cilial spots; a large broad curved black discal band. Thorax, head, palpi, and legs above dark brown; abdomen orange-yellow; legs and abdomen beneath paler; a yellow spot on tibiæ and tarsal joints; palpi black tipt. Female: forewing brighter coloured, mottled with grey and brown; strigæ paler grey; medial area and fasciæ on exterior border chalybeous-grey; postmedial line irregularly sinuous, with a prominent white dentate spot on its middle and narrow lunules below it; reniform mark triangularly bent and more or less black; orbicular spot minute, black: hindwing and body as in male.

Expanse 3 to $4\frac{1}{2}$ inches.

Larva semi-looped, cylindrical, sparsely covered with minute hairs; with sixteen feet, but the first pair of ventrals rudimentary; eleventh segment thickened at the dorsal extremity and surmounted by a tubercular spot. When at rest holds the head up and also the last segments; frequently curling the anterior segments up in front. Changes to pupa in a canopy of growing leaves fixed together and lined with a net-like web, pupa fastened by the tail.

OTHREIS CAJETA (Plate 162, Fig. 1, 1*a*, ♂ ♀).

Phalæna Noctua Cajeta, Cramer, Pap. Exot. i. p. 48, pl. 30, fig. A B, ♂, C ♀ (1779).
Corycia Cajeta, Hübner, Verz. bek. Schmett. p. 265 (1818-25).
Ophideres Cajeta, Guénee, Noct. iii. p. 112, ♂ ♀.
Othreis Cajeta, Moore, Trans. Zool. Soc. xi. p. 67, pl. 13, fig. 2, 2*a*, ♂ ♀ (1881).
Ophideres multiscripta, Walker, Catal. Lep. Het. B. M. xiii. p. 1226 (1857), ♀.

Male: forewing dark umber-brown, suffused with greyish fawn colour externally, being greyest at the posterior angle; a few grey strigæ disposed on the basal and costal areas, and a basal and subapical cluster of olive-green or pale ochreous, and dark brown scales; veins alternately pale and black-speckled; an equidistant curved antemedial and a postmedial transverse blackish duplex line, which is prominent and pale centred in some specimens, indistinct in others; a small pale-circled blackish orbicular spot, and pale-bordered dark elongated lunular reniform mark: hindwing orange-yellow; with a black apical marginal angular-bordered band, and yellow cilial spots, a short black curved discal band. Thorax, head, palpi, and legs above brown; legs with white spots. Female: forewing brownish greyish-ochreous or fawn-colour, numerously covered with black pale-grey bordered speckled strigæ, which are thickly disposed along the costa, and form irregular fasciæ across the disc; posterior angle broadly greyish, above which is a small dentate whitish spot; reniform mark prominent, triangularly angled, and black lined; a minute black pale-encircled orbicular spot: hindwing and body as in male.

Expanse 3 to 3½ inches.

OTHREIS ANCILLA (Plate 161, Fig. 3, 3*a*, *b*, ♂ ♀, larva).

Phalæna Noctua Ancilla, Cramer, Pap. Exot. ii. p. 84, pl. 149, fig. F (1779), ♀.
Ophideres Ancilla, Guénee, Noct. iii. p. 114, ♀; Walker, Catal. Lep. Het. B. M. xiii. p. 1224, ♀.
Othreis Ancilla, Moore, Trans. Zool. Soc. xi. p. 67, pl. 12, fig. 2, 2*a*, pl. 13, fig. 3, 3*a* (1881), ♂ ♀.
Phalæna strigata, Donovan, Ins. India, pl. 54 (1800), ♀.
Othreis Homæna, Hübner, Verz. bek. Schmett. p. 264 (1818-25).
Ophideres bilineosa, Walker, Catal. Lep. Het. B. M. xiii. p. 1227 (1857), ♂.

Male: forewing deep ferruginous-brown, with numerous darker brown strigæ; crossed by indistinct greenish-brown fasciæ, which are bordered with glaucous-grey or purple; an inwardly-oblique subbasal, and a postmedial transverse black waved line, and a paler basal and medial less defined line; an indistinct orbicular punctiform spot, and a brown-bordered reniform mark: hindwing orange-yellow; marginal black band attenuated hindward, cilial spots yellow; a short bilobed black discal band. Thorax, head, palpi, fore and middle legs deep ferruginous-brown; abdomen and hind legs orange-yellow. Female: forewing dark purple-brown, the strigæ darker, the transverse fasciæ glaucescent-purple, the postmedial transverse oblique black line sinuous hindward; a broad longitudinal irregular angular-bordered green band

extending below the cell from near the base to beyond the postmedial line; reniform mark partly green: hindwing and body as in male.

Expanse $2\frac{1}{4}$ to 3 inches.

Larva half looped; with sixteen legs, the first middle pair being so slightly developed as to be useless for progression; the twelfth segment raised and dorsally surmounted by a single blunt red tubercle raised above the skin, behind which the body slopes abruptly down towards the anal legs; spiracles oval and black. General colour dusky purplish-brown, dotted with numerous minute cobalt-blue spots, regularly arranged, and with large yellow oval patches on the fourth, fifth, and sixth segments, those on the sides of the fifth and sixth being in the shape of ocelli, of which the iris is yellow, and the pupil azure-blue surrounded by black; the ninth and tenth segments also more or less irregularly patched with yellow. Pupa beneath a canopy of living leaves fastened firmly together and thinly lined with a bed of silk; pupa fastened by the tail, of an orange colour, burnished and roughened like shagreen.

"Feeds on Menispermum." (*Dr. Thwaites.*)

Genus ARGADESA.

Argadesa, Moore, Trans. Zool. Soc. xi. p. 74 (1881).
Ophideres (part), Guénee; Walker.

Forewing in both sexes with the exterior margin oblique and scalloped throughout its length. Palpi shorter, and more slender.

ARGADESA MATERNA (Plate 161, Fig. 2, ♂).

Phalæna Noctua materna, Linnæus, Syst. Nat. ii. p. 840 (1767); Drury, Ins. ii. p. 24, pl. 13, fig. 4; Cramer, Pap. Exot. ii. pl. 174, fig. B, iii. pl. 267, fig. E.
Noctua materna, Fabricius, Spec. Ins. ii. p. 212; Ent. Syst. iii. 2, p. 16.
Rhytia materna, Hübner, Verz. bek. Schmett. p. 264.
Triphæna materna, Westwood, Nat. Libr. Exot. Moths, p. 201, pl. 25, fig. 2.
Ophideres materna, Boisduval, Faun. Ent. Madag. Bourb. et Maur. Lep. p. 100; Guénee, Noct. iii. p. 113; Walker, Catal. Lep. Het. B. M. xiii. p. 1221.
Argadesa materna, Moore, Trans. Zool. Soc. xi. p. 74, pl. 12, fig. 4, 4*a*, pl. 14, fig. 3, 3*a*, ♂ ♀.
Noctua hybrida, Fabricius, Syst. Ent. p. 593 (1775).

Male: forewing greenish-grey, numerously covered with greenish-brown or purple-brown transverse confluent strigæ; with a short curved dark brown antemedial costal line and a distinct oblique postmedial line; between the lines are three broad purple-glossed plumbeous longitudinal streaks, the upper streak short and near the costa, the next from lower angle of the cell, the third below the cell; renifom mark trilobed, purple-black; a narrow grey streak curving below the apex and spreading irregularly to the posterior angle: hindwing orange-yellow, with a narrow black marginal band and prominent white cilial spots; a small single black

discal spot. Thorax greenish-grey, head and palpi above brown, beneath yellow; palpi black tipt; forelegs brownish above; abdomen and legs orange-yellow. Female: forewing with darker and more prominent strigæ, the three longitudinal discal streaks much larger, broader, contiguous, purple-glossed, more narrowly divided, and bordered with white: hindwing and body as in male.

Expanse $2\frac{1}{2}$ to $3\frac{3}{4}$ inches.

Genus MÆNAS.

Mænas, Hübner, Verz. bek. Schmett. p. 264 (1818-25); Moore, Trans. Zool. Soc. xi. p. 71 (1881).

Ophideres (part), Guénee; Walker.

Forewing elongated, trigonal; costa slightly arched towards the end, apex acute; exterior margin oblique, straight, even; posterior margin recurved, with a slight tufted angle near the base. Palpi short, compactly clothed with short scales, apical joint small, very short and conical.

MÆNAS SALAMINIA (PLATE 161, FIG. 1, 1*a*, *b*, larva).

Phalæna Noctua Salaminia, Cramer, Pap. Exot. ii. p. 117, pl. 174, fig. A (1779); Clerck, Icones, pl. 48, fig. 5, 6.

Noctua Salaminia, Fabricius, Ent. Syst. iii. 2, p. 17 (1793).

Mænas Salaminia, Hübner, Verz. bek. Schmett. p. 264 (1818-25); Moore, Trans. Zool. Soc. xi. p. 71, pl. 12, fig. 3, *a*, *b*, pl. 14, fig. 2.

Ophideres Salaminia, Guénee, Noct. iii. p. 115; Walker, Catal. Lep. Het. B. M. xiii. p. 1225.

Male and female: forewing dark green with golden reflections; a broad purplish-grey costal band extending from near the base of posterior margin to the apex, and a narrower similar band on the exterior border, the costal band with numerous short green and purplish transverse strigæ which are confluent along the costal edge; the exterior band with a paler purplish-green inner border; a distinct red line extending along the discal portion of the lower median vein: hindwing orange-yellow, with a black apical-marginal band, with yellow cilial spots, and a short black bilobed discal band. Thorax, head, palpi, and front of forelegs ochreous-green; abdomen and legs orange-yellow.

Expanse 3 to $3\frac{1}{2}$ inches.

Larva half looped; with sixteen legs, the first middle pair imperfectly developed; twelfth segment with a raised conical reddish tubercle; general colour purplish greyish-black, sparsely greyish-white speckled; fifth, sixth and seventh segments with a small yellowish-white subdorsal spot, beneath which on the sixth and seventh segment is a red-ringed black ocellus, each with a whitish anterior pupil. Before changing to pupa the colour alters to olive brown, speckled with darker brown, with a pale lateral fascia along the middle segments, and a purplish-brown fascia from the conical tubercle to fourth middle leg. Pupa dark purplish-black.

"Feeds on Menispermaceæ." (*Thwaites.*)

Genus RHYTIA.

Rhytia, Hübner, Verz. bek. Schmett. p. 264 (1818-25); Moore, Trans. Zool. Soc. xi. p. 72 (1881).
Ophideres (part), Guénee; Walker.

Forewing in both sexes with the exterior margin even, and angulated outward in the middle. Palpi very long, the third joint with broad clavate tufted tip.

Larva similar in form to that of Othreis, but with a slight dorsal protuberance on the fifth, sixth, seventh, and eleventh segments.

RHYTIA HYPERMNESTRA (Plate 162, fig. 3. 3*a*, ♂ ♀).

Phalæna Noctua Hypermnestra, Cramer, Pap. Exot. iv. pl. 323, fig. A, B (1782).
Rhytia Hypermnestra, Hübner, Verz. bek. Schmett. p. 264; Moore, Trans. Zool. Soc. xi. p. 73, pl. xii. fig. 6; xiv. f. 4, 4*a*.
Ophideres Hypermnestra, Guénee, Noct. iii. p. 116; Walker, Catal. Lep. Het. B. M. xiii. p. 1225.

Male: forewing ochreous-green, numerously covered with slender blackish transverse strigæ; crossed by pale chalybeous-grey bordered darker fasciæ, by a distinct antemedial, and an oblique postmedial brown line; an indistinct dusky brown suffused reniform mark; a curved grey streak below the apex and grey strigæ above posterior angle; transverse lines with chalybeous-grey inner border: hindwing orange-yellow, with a broad marginal black band, white cilial row of spots and apical angle, and with two small black discal spots, the upper spot oval, the lower recurved. Thorax, head, palpi, and forelegs in front ochreous-green; palpi with a lateral linear grey streak; abdomen and legs above orange-yellow, beneath grey. Female darker green, with transverse strigæ, and oblique lines not bordered with chalybeous-grey; with a series of large creamy-white spots on the discocellular area, another series below the cell, a large patch at the posterior angle, and two small slender spots below the apex, all partially crossed by slender olive-brown strigæ.

Expanse 3 to $3\frac{1}{4}$ inches.

"Larva half-looped, slightly humped on the fifth, sixth, seventh, and twelfth segments. Legs fourteen, with a rudimentary pair on seventh segment. Colour dusky purplish-brown, blotched with very dark brown, and spotted with minute dots of cobalt-blue; on each side of sixth and seventh segments is a large ocellus, the iris being bright yellow in front and vermilion behind, pupil purplish-brown with a crescent of cobalt-blue, and with a centre which is considerably darker than the rest. The segments are also extensively marked with black and yellow patches of various shapes." (*Ward.*)

Genus ADRIS.

Adris, Moore, Trans. Zool. Soc. xi. p. 69 (1881).

Forewing with the costa arched beyond the middle and slightly concave at the

end, the apex being produced into a lengthened point; exterior margin very oblique and convex, the posterior angle very acute; posterior margin very short in male, lobe much produced, the excavation beyond short: hindwing prolonged anteriorly, exterior margin convex in the middle. Palpi larger and stouter than in allied genera, more laxly clothed, the third joint with a large laterally compressed dense tuft above; fore tibiæ in male more densely clothed with longer lateral hairs.

Type, A. tyrannus.

ADRIS RUTILUS (Plate 162, fig. 2, ♂, 2*a*, larva).

Adris rutilus, Moore, Trans. Zool. Soc. xi. p. 70.

Male: forewing ferruginous, very sparsely speckled with indistinct greenish-ochreous scales, and the veins slightly lined with grey and blackish speckles; crossed by darker wavy chalybeous-grey bordered fasciæ; a very indistinct antemedial transverse dusky line, and a prominent postmedial oblique black line; a cluster of greenish speckles near the base, another cluster on the reniform mark at upper end of the cell, and a few speckles along outer border of the oblique line: hindwing orange-yellow, with an elongated narrow curved black upper discal band and a small shorter black lobate lower discal band. Thorax, head, palpi, and forelegs in front ferruginous; abdomen above and beneath, and legs, yellow. Female: forewing darker ferruginous, more prominently speckled; the veins speckled also more distinct; and with a whitish patch below the median vein: hindwing with broader black bands.

Expanse 3 to 3¾ inches.

Larva half-looped; with sixteen legs, first middle pair aborted; purplish-black; head and conical prominence on twelfth segment dark dull red; sparsely speckled with bluish-grey; spiracles also bluish-grey; a slender dorsal white line on sixth, seventh, and twelfth segments; a lateral red-streaked ocellus on sixth and seventh segments, and an oblique yellow black-streaked band extending across the back from the last middle leg, a yellow lateral spot also on the twelfth segment. Pupa purplish-black.

"Feeds on Menispermaceæ." (*Thwaites.*)

Family PHYLLODIDÆ.

Imago large: forewings mostly falcate at the tip, not excavated on the posterior border. Body more or less stout, elongated; palpi ascending, stout, broad, apex slender; antennæ very long; legs very long.

Larva half-looped; with sixteen perfect legs; some with, or without, short dorsal conical tubercular prominences. Pupa stout, enclosed amongst leaves of the food plant.

Genus PHYLLODES.

Phyllodes, Boisduval, Voy. Astrolabe, i. Lep. p. 246 (1832); Guénée, Noct. iii. p. 120; Walker, Catal. Lep. Het. B. M. xiii. p. 1232.

Ischyja (part), Hübner, Verz. bek. Schmett. p. 265.

Wings ample: forewing long; costa much arched, apex very acute and falcate, exterior margin very obliquely convex, posterior margin rounded near the base; cell extending two-fifths the length; first subcostal emitted at one-half before end of the cell, second at one-tenth, third emitted from end of the cell, trifid, joined to second by a short cross spur at about one-half from its base, fourth at two-thirds from the base of third, fifth from below third at one-fifth beyond its base; discocellular concave, bent at each end, radials from the angles; middle median from angle close to end of the cell, lower at one-half; submedian curved at the base and widely separated from the posterior margin: hindwing large, triangular; costa long, apex obtuse, exterior margin very oblique, convex; cell extending one-third the length; two subcostals from end of the cell; discocellular concave, radial from lower end; middle median from one-sixth before the end, lower at two-fifths; submedian and internal vein straight. Body stout, long; palpi ascending, second joint very stout, broad, convex in front, compactly pilose, adpressed, third joint very slender, clavate, naked, about one-fourth length of second; antennæ simple, very long; legs stout, very long, pilose beneath, spurs long.

Larva half looped, thick; with sixteen perfect legs; without prominences. Pupa amongst leaves of food-plant.

PHYLLODES MALIGERA (Plate 163, fig. 2, 2*a*).

Phyllodes maligera, Butler, Ent. Monthly Mag. 1883, p. 138.

Forewing pale purpurescent cinereous-brown, sparsely speckled with cinereous-white dots and strigæ, the strigæ being most thickly disposed on the outer border; extending from the apex to middle of the disc is a nearly straight dusky speckled-bordered white line, below which is a slight dusky-speckled lunular discal line, the outer marginal area beyond being slightly ochreous; basal area and the apex crossed by waved chalybeous cyaneous fasciæ; a black punctiform orbicular spot, and an olivescent-brown streaked recurved reniform mark, which has also lower white lined streaks: hindwing blue-black, with a few cinereous strigæ at the apex, and with a large irregular-bordered rounded scarlet anal patch with a duplex white centre. Thorax, head, palpi, and legs cinereous-brown; abdomen black with slight bluish dorsal segmental bands, apex cinereous-brown.

Expanse $5\frac{1}{4}$ inches.

Larva half looped; with sixteen perfect legs; without tubercular prominences. Pupa stout, ferruginous-brown; abdominal segments with black and speckled bands beneath, lateral black stripes, and dorsal grey bands.

Genus ISCHYJA.

Ischyja, Hübner, Verz. bek. Schmett. p. 265 (1818-25).

Potamophora, Guénee, Noct. iii. p. 122 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1234.

Male. Wings large: forewing elongate, triangular, costa convex towards the end, apex very acute, subfalcate, exterior margin oblique, wavy, convex posteriorly; cell extending two-fifths the length; first subcostal emitted at three-fifths before end of the cell, second at one-fifth, trifid, third at one-fourth from base of second and fourth from near end of third, fifth from end of the cell and slightly touching third near its base; discocellular bent in the middle, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at one-third; submedian recurved, with a short slender spur from below the base: hindwing short, broad, exterior margin convex, angular in the middle, wavy; cell short, reaching one-fourth the length; subcostal curved before end of the cell; first branch emitted before the end; discocellular concave, radial curved upward from lower end; medians from end of the cell, middle branch thickened, running alongside and almost joined to the upper branch to half its length, the lower branch being emitted at two-thirds from the base of middle branch; submedian recurved and contorted at the base, internal vein undulated; on the upperside the veins from the base are lined with fine woolly hairs, and there is also a tuft longitudinally between submedian and internal vein on the underside, the abdominal margin being dilated at end of the internal vein and there slightly folded. Body stout; thorax woolly; palpi ascending, second joint very broad, compressed, laxly squamose, reaching level of the eyes, third joint slender, clavate, nearly half length of second; legs stout, very densely pilose, spurs long; antennæ stout, very long, serrated and ciliated in the male, setaceous in the female. Female: forewing broader than in male: hindwing more triangular, exterior margin very oblique; veins in their normal position.

ISCHYJA MANLIA (Plate 163, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Phalæna Noctua Manlia, Cramer, Pap. Exot. i. p. 144, pl. 92, fig. A (1779).

Noctua Manlia, Fabricius, Ent. Syst. iii. 2, p. 28.

Ischyja Manlia, Hübner, Verz. bek. Schmett. p. 265 (1818-25).

Potamophora Manlia, Guénee, Noct. iii. p. 123 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1234.

Male: forewing brown, minutely speckled with short transverse blackish strigæ, the ground colour being either of a dark ochreous, ferruginous, or purplish-brown tint, the basal half generally darkest and brightest coloured; the outer half sometimes transversely washed with glaucescent-grey, the division across the wing being defined by a greyish-speckled blackish diffused medial transverse oblique line; the basal half crossed by two indistinct pale-bordered blackish waved lines, the outer half with a more or less visible brighter coloured fascia, which is defined by the zigzag clustering

of the blackish strigæ; orbicular and reniform marks blackish lined and speckled, the centre of both being either of the same colour as the basal area, or ochreous, with an intervening black streak, and in some specimens they are defined by an ochreous-yellow line, with a deep black patch at the end and base of the cell as well as an intervening quadrate patch, in these latter the pale line does not then border the marks along the median vein; below the cell is a more or less defined longitudinal streak which is generally black and dilated at each end, and also cut by the pale ochreous transverse line, this streak being bordered above by a glaucescent-greyish fascia: hindwing dusky brown, the apical marginal border being almost black, and the anal area marked with black strigæ bordered by cinereous speckles; across the upper disc is a broad cinereous-blue band. Body dark brown; head, palpi, and forelegs above with pale speckles.

Female: with broader wings: forewing similarly coloured, the outer half being more or less glaucescent-grey speckled; orbicular and reniform marks more or less indistinct, their black borders and lower streak obsolete: hindwing as in male.

Expanse 3 to 4 inches.

Larva half looped; with sixteen legs; fifth, sixth, seventh, eleventh, and twelfth segments with a short conical dorsal prominence; varied with purplish-brown and ochreous, and irregularly marked with short black streaks; head ochreous, dotted with brown. Pupa purplish-brown; efflorescent; enclosed amongst leaves of food-plant.

"Feeds on *Terminalia*, *Cinnamomia*, &c." (*Thwaites.*)

Genus AGONISTA.

Lygniodes,* Guénee, Noct. iii. p. 123 (1852); Walker, Catal. Lep. Het. B. M. xiii. p. 1235.
Agonista, Rogenhoffer, Nov. Voy. Lep. iv. pl. 113, fig. 5 (1874).

Male: forewing triangular, broad, velvety, costa arched, apex very acute, exterior margin oblique, even: cell very short, extending only to one-sixth the length; first subcostal emitted at one-third before end of the cell, second from close to end, trifid, third at one-sixth from base of second, fourth about one-half from base of third, fifth from end of the cell and slightly touching third close to its base; discocellular deeply concave, bent at each end, radials from the angles; middle median at one-fifth before end of the cell, lower at one-half; submedian almost straight: hindwing short, broad, triangular, exterior margin very oblique; cell very short, reaching about one-fifth the length; two subcostals from end of the cell, the first branch being much curved; discocellular bent in the middle, radial from near lower end; middle median from close to end of the cell, lower at one-third; submedian and internal straight.

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* Used by Schonherr in 1836, for a genus of Coleoptera.

Body rather slender, abdomen smooth, pointed at the tip; palpi ascending, compressed, second joint laxly squamose, of equal width throughout its length, reaching the vertex, third joint linear, slender, three-fourths the length of second; antennæ slender, simple; legs long, slender, laxly pilose, spurs long.

Type, A. hypoleuca.

AGONISTA REDUCENS (Plate 163, Fig. 3, 3*a*, ♂ ♀).

Lygniodes reducens, Walker, Catal. Lep. Het. B. M. xiii. p. 1236 (1857), ♂.
Lygniodes disparans, Walker, *id.* xv. p. 1817 (1858), ♀.

Male. Wings purplish-brown, with blue and green reflections in certain lights: forewing with indistinct traces of transverse darker brown short strigæ, those on the disc slightly cinereous bordered; cilia brown: hindwing with more or less distinct brown transverse strigæ, those along the abdominal border being slightly bordered by pale cinereous scales; cilia and extreme marginal edge from anal angle cinereous-white. Body, palpi, and legs purplish-brown.

Female. Ochreous-brown, somewhat olivescent in some lights; crossed by numerous dark brown undulating strigæ: forewing with a slight transverse darker brown subbasal and a medial waved fascia, followed by a discal angulated fascia, and a submarginal row of white tipt black points: hindwing with a similar medial transverse brown fascia, and a discal pale-bordered line, the pale border being dilated at the costal end.

Expanse, ♂ $2\frac{3}{4}$, ♀ 3 inches.

Family EREBIDÆ.

Imago generally large. Wings with transverse lines: forewing with the orbicular and reniform spots, when present, of the usual shape. Body stout; antennæ often ciliate, sometimes crenulate or serrated in the male; palpi erect, apex long, often spatular. (*Guénee.*)

Larva cylindrical; with sixteen legs.

Genus OXYODES.

Oxyodes, Guénee, Noct. iii. p. 128 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1239.

Forewing elongated, triangular, falcate at the tip, exterior margin slightly convex posteriorly; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-eighth, trifid, third at one-eighth from base of second, and fourth at three-fourths from base of third, fifth from end of the cell and touching third near its base; discocellular bent in the middle, radials from upper and lower end; middle median from angle close to end of the cell, lower at one-half; submedian slightly curved near the base and with a very slender lower branch at

one-sixth from the base: hindwing broadly conical, costa arched towards the base, apex and exterior margin very convex; cell short, extending one-third the length; two subcostals from end of the cell; discocellular very slender, outwardly oblique and slightly concave; radial from close to lower end; middle median from close to end of the cell, lower at one-fourth; submedian and internal straight. Body rather slender, abdomen tapered to the tip; palpi erect, compressed, first and second joints laxly squamose, second joint reaching to the vertex, third joint slender, two-thirds length of the second; antennæ long, slender, setaceous; legs long, fore femora and tibiæ densely clothed beneath with fine long hairs, middle and hind tibiæ fringed beneath, tarsi very long, spurs long and slender.

OXYODES SCROBICULATA (Plate 164, Fig. 1).

Noctua scrobiculata, Fabricius, Spec. Ins. ii. p. 212 (1781); Mant. Ins. ii. p. 137.
Phalæna Noctua scrobiculata, Gmelin, Syst. Nat. i. 5, p. 2531.
Phalæna Noctua Clytia, Cramer, Pap. Exot. iv. pl. 399, fig. G (1782).
Oxyodes Clytia, Guénee, Noct. iii. p. 128; Walker, Catal. Lep. Het. B. M. xiv. p. 1239.

Brownish yellowish-ochreous: forewing with a more or less distinct antemedial, medial, and a discal blackish-brown scaled sinuous line, followed by an outer discal less defined upper line, and a similar submarginal line, the upper interspace from the inner discal line to the outer margin being more or less clouded with brown; a small rounded more or less distinct blackish-scaled orbicular spot and a large reniform mark; the costal border and basal area slightly sprinkled with blackish-brown scales: hindwing with a broad longitudinal blackish-brown subcostal band, and four transverse outer discal indistinct blackish-scaled sinuous lines, and a less defined discocellular streak. Thorax, head, palpi, and legs brownish-ochreous; abdomen paler.

Expanse 2 to 2¼ inches.

Family OMMATOPHORIDÆ.

Imago large or moderate. Wings broad, thick, alike in colour, and with similar markings: forewing with the reniform spot forming a large ocellus. Body robust; palpi long, erect, apex slender, linear; antennæ moderately long, very generally filiform. (*Guénee.*)

Larva elongated, cylindrical, with sixteen legs, the first middle pair being sometimes imperfect; a single or double conical dorsal prominence on twelfth segment; an oval ocellated spot on each side of fifth segment.

Pupa among growing leaves.

Genus SPEIREDONIA.

Speiredonia, Hübner, Verz. bek. Schmett. p. 272 (1818-25); Zuträge Exot. Schmett. fig. 777 (1832); Walker, Catal. Lep. Het. B. M. xiv. p. 1292.

Spiredonia, Guénee, Noct. iii. p. 170 (1852).

Wings moderately broad: forewing elongated, triangular, costa somewhat convex towards the end, apex pointed, exterior margin oblique and scalloped; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, third at one-sixth from base of second and fourth at one-fifth from base of third, fifth from end of cell and joined to third near its base by a short spur; discocellular slightly concave, bent close to each end, radials from the angles; middle median from angle close to end of cell, lower at two-fifths; submedian slightly curved near the base: hindwing broad; costa rather long, exterior margin very oblique, convex, scalloped; cell extending to one-third the length; two subcostals from end of the cell; discocellular obliquely concave, radial from near lower end; two upper medians from end of the cell, lower at one-sixth; submedian and internal straight. Body stout; palpi erect, laxly squamose, second joint reaching level of vertex, in male, rather stout, third joint lanceolate, one-third length of second; in the female the second and third joints are more slender, the third being two-thirds the length of second; legs stout, thickly pilose, hind legs densely clothed beneath, tarsi short in male, spurs long; antennæ setaceous.

Type, S. Feducia.

SPEIREDONIA RETRAHENS (Plate 164, Fig. 4, 6, var.).

Speiredonia retrahens, Walker, Catal. Lep. Het. B. M. xiv. p. 1294 (1858).

Ommatophora albifascia, Walker, *id.* xxxiii. p. 947 (1865)—Variety.

Speiredonia conspicua, Felder et Rogen. Nov. Voy. Lep. iv. pl. 113, fig. 7 (1874) ♀.

Male and female. Dark purplish-ferruginous brown: forewing crossed by basal, subbasal, and medial undulated paler ferruginous-bordered narrow black duplex bands; contiguous to the subbasal band is the small orbicular spot, and the medial band joins the inner side of the quadrate pale bordered reniform mark, beyond which is a blackish-grey incomplete ocellus, the ocellus with white-lined black outer border, and the upper end being acutely bent between the radials and then extending outwardly upward to the costa, the ocellus also being marked by a small white outer dentate spot; beyond is an outer discal blackish fascia, which is traversed by a pale sinuous line, followed by a submarginal pale-bordered black sinuous line and a marginal waved line: hindwing with a transverse discal acutely sinuous pale-bordered duplex black line, a pale lined outer discal black fascia, submarginal pale-bordered black sinuous line, and marginal waved line; a pale spot also at end of the cell. The transverse bands on both wings bordered with bluish-grey fasciæ in some lights.

Body dark purplish-ferruginous brown; collar, tegulæ, and abdominal bands slightly darker and glossed with purplish-grey; legs brown, with pale tarsal bands.

In some specimens (*S. albifascia*, Plate 164, fig. 6) both sexes have the medial and discal lines, the mark over the ocellus, and the outer side of the discal fascia, with its traversing sinuous line, more or less prominently bordered with purpurescent greyish-white, and the transverse discal and submarginal lines on the hindwing also prominently bordered with the same white colour.

Expanse, ♂ 3, ♀ $2\frac{3}{4}$ inches.

SPEIREDONIA ZAMIS (Plate 164, Fig. 3).

Phalæna Noctua Zamis, Stoll, Cramer's Pap. Exot. v. p. 162, pl. 36, fig. 11 (1791).
Spiredonia Zamis, Guénee, Noct. iii. p. 171.

Differs from *S. retrahens* in its smaller size, comparatively narrower wings, and much paler colour. *Male* and *female*. Both wings with similarly disposed markings having pale purpurescent ochreous-brown interspaces; the outer discal transverse area of forewing and the medial area of hindwing being conspicuously paler, and the inner discal sinuous black line formed of single points—not duplex as in *S. retrahens*.

Expanse, ♂ $2\frac{5}{8}$, ♀ $2\frac{1}{8}$ inches.

SPEIREDONIA FEDUCIA (Plate 164, Fig. 2).

Phalæna Noctua Feducia, Stoll, Cramer's Pap. Exot. v. p. 160, pl. 36, fig. 3 (1791).
Speiredonia Feducia, Hübner, Verz. bek. Schmett. p. 272 (1818-25); Geyer, Hübn. Zutr. Exot. Schmett. 38, 389, fig. 777-8 (1832); Walker, Catal. Lep. Het. B. M. xiv. p. 1292.
Spiredonia Feducia, Guénee, Noct. iii. p. 171.
Sericea parvipennis, Walker, Catal. Lep. Het. B. M. xiv. p. 1279 (1858).

Male and female. Purplish ferruginous-brown: forewing crossed by basal, subbasal, and medial undulating narrow black pale ferruginous-bordered duplex bands, the subbasal band enclosing the orbicular spot, and the medial band the reniform mark, adjoining which is a white-lined black-bordered incomplete ocellus, which has either a purplish-grey or pale ferruginous centre with whitish speckles, and above which is a contiguous lunular white-lined black streak curving upward and ending in a paler line on the costa; beyond this is an outer discal pale-lined blackish sinuous fascia, a submarginal row of short linear black spots, and a marginal wavy line: hindwing with a transverse pale-bordered black sinuous discal line, an outer discal pale-lined blackish fascia, submarginal linear black spots, and marginal line, the interspace between the fascia and submarginal spots clouded with purplish-grey; a small pale spot also at end of the cell. Body, and legs dark ferruginous-brown.

Expanse 2 to $2\frac{1}{4}$ inches.

Genus SERICIA.

Sericea, Guénee, Noct. iii. p. 172 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1295.

Wings comparatively shorter and broader than in Speiredonia; venation very similar, except in the forewing the fourth subcostal branch is emitted at one-half from base of the third, and in the hindwing the lower median at one-fourth before end of the cell; third joint of the palpi also longer in both sexes.

SERICIA ANOPS (PLATE 164, FIG. 7).

Sericia anops, Guénee, Noct. iii. p. 173 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1296.

Dark purplish-brown, glossed with violet-blue in some aspects: forewing with a transverse basal, subbasal, medial, discal, and submarginal pale-bordered black sinuous lines, the discal line running close to the medial from the base and then irregularly curving outward beyond the end of the cell; a black orbicular spot, and a pale centred oval reniform mark; a marginal row of small pale spots: hindwing with a transverse waved discal pale-bordered black sinuous line, and a submarginal lunular line, and a marginal row of pale spots. Thorax with dark bands, abdomen glossed with bluish-black.

Expanse $2\frac{1}{8}$ to $2\frac{5}{8}$ inches.

Genus PATULA.

Patula, Guénee, Noct. iii. p. 176 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1299.

Wings large, woolly at the base: forewing very broad, triangular, costa much arched towards the end, apex pointed, exterior and posterior margin being of about equal length, the former deeply scalloped; cell short, less than one-third the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at a short distance from base of second, and fourth at one-half from base of third, fifth from end of the cell and slightly touching third close to its base; discocellular inwardly oblique, bent in the middle and close to each end, radials from the angles; middle median at one-fourth before end of the cell, lower at more than one-half; submedian straight, with a short slender spur from below the base: hindwing in male with the costal border broadly folded over on to the upperside from base to near end of upper median; beneath the fold is a glandular patch of densely packed, extremely fine and delicate long silky filaments; exterior margin broadly scalloped; cell short, reaching only one-fourth the length, the upper end abbreviated to half its length; costal and subcostals very short, ascending to the border of the fold before the middle, the subcostals being wide apart at their base, and each ending in a slender thread on the extreme costal edge; discocellular very oblique, bent acutely inward near upper end, the radial from below the angle; two upper medians from end of the cell, lower at one-third; submedian and internal vein

straight: hindwing in female very broad, exterior margin deeply scalloped; cell one-fourth the length; veins in their normal position; two subcostals from end of the cell; discocellular bent in the middle, radial and upper median from end of the cell, middle median at one-fifth, and lower at two-fifths. Thorax very stout, woolly; palpi vertical, first and second joints laxly squamose, second joint reaching level of vertex, third joint slender, linear, two-thirds length of second; antennæ long, slender, setaceous; legs long; femora pilose beneath, fore and middle tibiæ spined, spurs long.

PATULA MACROPS (Plate 164, Fig. 5, ♂).

Phalæna Attacus macrops, Linnæus, Syst. Nat. 12 ed. iii. p. 225 (1768).

Argiva macrops, Hübner, Verz. bek. Schmett. p. 272.

Patula macrops, Guénee, Noct. iii. p. 177; Walker, Catal. Lep. Het. B. M. xiv. p. 1300.

Noctua Bubo, Cramer, Pap. Exot. ii. p. 114, pl. 171, fig. A, B, ♂ (1779); Fabricius, Spec. Ins. ii. p. 209 (1781); Mant. Ins. ii. p. 135; Ent. Syst. iii. 2, f. 9.

Erebus macrops, Donovan, Ins. China, pl. 44, fig. 1, ♀; Sulzer, Ins. p. 160, pl. 22, fig. 2, ♂.

Purplish ferruginous-brown, in some aspects purplish greyish-brown: forewing crossed by a black basal, subbasal, antemedial, medial, and a discal zigzag line, each line dilated at the costal end; contiguous to the latter line is an irregular undulating angulated blackish fascia, followed by an outer discal row of black linear spots disposed in an undulating series, the middle spots in some specimens being somewhat bent: at end of the cell is a very large rounded black-bordered ferruginous ocellus, which is crossed within its outer area by a curved black-streaked band, the upper part being dilated inward and traversed by an angulated bluish-white line, the lower part marked by three bluish-white speckled dentate streaks; the upper end of the middle transverse line curved outside the ocellus: hindwing with the costal border folded over on to the upper side, the fold containing a dense mass of long pale yellow delicate silky filaments; crossed by a medial and a discal sinuous lunular line, followed by a broader but paler fascia, and an outer discal row of four linear spots, these spots on some specimens being somewhat bent. Female with somewhat paler outer border to the angulated discal line, the discal line of the hindwing being also broader and more dentated than in the male, and the outer discal row of linear spots composed of seven in the series. Thorax with blackish bands.

Expanse 5 to 5½ inches.

Genus ARGIVA.

Argiva, Hübner, Verz. bek. Schmett. p. 272 (1818-25); Guénee, Noct. iii. p. 178 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1301.

Wings ample: forewing broad, triangular, costa arched towards the end, angular at the apex, exterior margin slightly oblique, denticulated, posterior angle convex; cell short, extending only one-fourth the length; first subcostal emitted at one-third

before end of the cell, second at one-eighth, trifid, third at one-tenth from base of second, and fourth at one-half from base of third, fifth from end of cell and joined to third at its base; discocellular inwardly oblique, concave, bent at each end, radials from the angles; middle median at one-fifth before end of cell, lower at one-half; submedian straight: hindwing in male narrow, triangular, exterior margin short, very oblique, and with three broadly scalloped angles; base of the costa folded over on to the upper side for a short distance and slightly inflated, and covering a glandular patch of short compactly disposed silky filaments; cell very short, distorted, costal and subcostal erect, discocellular short, also erect, radials ascending close to costal; median branches emitted together close to base, upper branch curved upward to margin close to radial, middle branch extending to apex of the wing, and lower branch to the middle; submedian and internal veins wide apart. Female: hindwing broad, exterior margin convex, denticulated; veins in their normal positions; two subcostals from end of cell; cell extending one-fourth the length; discocellular concave, radial and upper median from end of cell, middle median from close to end, lower at nearly one-half; submedian and internal straight. Body moderately stout, abdomen smooth, not extending beyond hindwings; palpi ascending, first and second joints compressed, laxly squamose, third joint long, very slender, nearly as long as second; antennæ long, slender, setaceous; legs rather long, slender, slightly pilose, fore and middle tibiæ slightly spinous; spurs long.

Type, A. hieroglyphica.

ARGIVA HIEROGLYPHICA (Plate 165, Fig. 2, 2*a*, ♂ ♀).

Phalæna Noctua hieroglyphica, Drury, Exot. Ins. ii. p. 3, pl. 2, f. 1, ♂ (1773); Donovan, Ins. Ind. pl. 54, fig. 2.

Noctua hieroglyphica, Fabricius, Ent. Syst. iii. 2, p. 11.

Argiva hieroglyphica, Hübner, Verz. bek. Schmett. p. 272; Guénee, Noct. iii. p. 179; Walker, Catal. Lep. Het. B. M. xiv. p. 1302.

Erebus hieroglyphica, Westwood's Edit. Drury, Ins. ii. 3, pl. 2, f. 1, ♂.

Phal. Noct. Hermonia, Cramer, Pap. Exot. ii. p. 119, pl. 174, fig. E (1779), ♀.

Phal. Noct. Mygdonia, *ib.* fig. F (1779), ♂.

Noctua Ulula, Fabricius, Spec. Ins. ii. p. 211 (1781); Mant. Ins. ii. p. 136; Ent. Syst. iii. 2, p. 211.

Male. Violet-brown; crossed by numerous short very indistinct blackish-brown strigæ: forewing with the strigæ darkest and confluent across the subbasal and discal area, thus more or less forming broad indistinct fasciæ; with a more distinct subbasal transverse sinuous line, and an oblique medial line, the latter curving upward and outward, forming a large ocellus beyond the cell, from the lower median to the subcostal, and broadly inward to below end of the cell, the end being dilated and bilobed, the dilated end also having a purplish-ferruginous centre and

bluish-white bordered line; obliquely before the apex is a narrow recurved bright deep yellow streak, which is sometimes broken in the middle, and thus forms two shorter recurved streaks: hindwing immaculate. Body dark violet-brown, palpi and legs paler.

Female. Olivaceous umber-brown, with more distinct and pale-bordered strigæ: forewing with similar transverse darker fasciæ, sinuous lines, and ocellus; the oblique subapical streak being broader and creamy-white, beyond which is a submarginal series of ill-defined blackish dentate spots with slight whitish centres, the spot between upper and middle median being large and prominent: hindwing with the short black strigæ forming a darker irregular medial and discal fascia, the interspaces of the strigæ bordering the discal fascia being more or less pale brownish-white; beyond is a more or less ill-defined indistinct submarginal zigzag fascia composed of the confluent strigæ. Body olivaceous umber-brown.

Expanse 3 to $3\frac{1}{4}$ inches.

Genus NYCTIPAO.

Nyctipao, Hübner, Verz. bek. Schmett. p. 271 (1818-25); Guénee, Noct. iii. p. 181; Walker, Catal. Lep. Het. B. M. xiv. p. 1303.

Male and female. Wings ample: forewing broad, elongated, triangular; costa convex, apex pointed, exterior margin very slightly oblique, acutely denticulated; cell short, extending one-third the length, broad at the end; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at one-tenth from base of second, and fourth at more than half from base of third, fifth from end of the cell and touching third close to its base; discocellular concave in the middle, bent at each end, radials from the angles; middle median from close to end of the cell, lower at one-third; submedian slightly curved from the base, and with a short spur from below the base: hindwing triangular, exterior margin acutely denticulated; cell very short, extending to only one-fifth the length; costal and subcostals in normal positions in both sexes; two subcostals from end of the cell; discocellular concave, radial and upper median from end of the cell; middle median from close to the end, lower at one-third; submedian and internal vein straight. Body stout, abdomen smooth, not extending beyond the hindwings; palpi very long, vertical, compressed, first joint pilose, second joint laxly squamose, third joint linear, obtuse at the tip and nearly as long as the second; antennæ long, finely ciliated in male, setaceous in female; legs stout, femora pilose beneath, hind tibiæ laxly pilose, spurs long, fore and middle tibiæ slightly spined in front.

Type, N. crepuscularis.

NYCTIPAO CREPUSCULARIS (Plate 165, Fig. 1, 1*a*, ♂ ♀).

Phalæna Attacus crepuscularis, Linnæus, Mus. Lud. Ulr. p. 378 (1764); Syst. Nat. x. p. 509 (part); Clerck, Icones, pl. 53, f. 3, 4; Seba, Thes. Mus. iv. pl. 20, f. 2, 3; Drury, Ill. Ex. Ins. i. p. 39, pl. 20, f. 1, 2; Cramer, Pap. Exot. ii. p. 98, pl. 159, f. A.

Noctua crepuscularis, Fabricius, Spec. Ins. ii. p. 211; Mant. Ins. ii. p. 136; Ent. Syst. iii. 2, p. 13.

Erebus crepuscularis, Duncan, Exot. Moths, p. 196, pl. 25, fig. 1.

Nyctipao crepuscularis, Guénee, Noct. iii. p. 182; Walker, Catal. Lep. Het. B. M. xiv. p. 1304.

Nyctipao ephesperis, Hübner, Verz. bek. Schmett. p. 272.

Male. Dark umber-brown: forewing with a transverse subbasal indistinct blackish pale-bordered undulated line, a medial black slightly angulated line extending outward from beyond middle of the costa, which is convexly angled in crossing the discocellular area beyond the cell, and is then continued very obliquely to near base of the posterior margin, the upper portion of the line forming the outer border of the ocelius, which is completed on the inner side by a broad ferruginous-brown pale-bordered black-lined lunate mark with lower bilobed end, the lower end being also traversed with a slender blue-white line, and streaked with black in front; bordering the medial line the area is broadly pale brownish-ochreous, thus forming a prominent elbowed band, the upper end of which is almost white; this is followed by a transverse discal slender pale black-bordered lunular undulated line, the broad outer border being traversed by a submarginal irregular-angulated zigzag series of whitish-bordered black recurved streaks, and a prominent dentate spot before the apex, the outer margin of the wing being pale umber-brown: hindwing with the broad pale brownish-ochreous band crossing near the base, followed by a pale-bordered black line, beyond which is the discal pale-bordered black line, and the submarginal irregular pale-bordered angulated zigzag black line, the broad outer margin of the wing being pale umber-brown; outer edges of the discal and submarginal lines fringed with greyish hairy scales. Thorax, head, palpi, and legs above umber-brown; abdomen brownish-ochreous, the base pale cinereous.

Female. Greyer brown, sometimes of a more ochreous-brown; marked as in male, except that the forewing has the medial elbowed line narrowly bordered with white below the angle, the discal line being also prominently white and denticulated; the submarginal line and apical spot also whiter. On the hindwing the subbasal band and bordering line is whitish, the discal line very prominently denticulated with purplish-white, and the submarginal irregular zigzag line broadly fringed with purplish-grey hairy scales. Thorax, head, palpi, and legs above greyish-brown, abdomen paler, the base greyish-white.

Expanse $3\frac{1}{2}$ to 4 inches.

Family HYPOPYRIDÆ.

Imago of moderate size or somewhat large. Wings rather broad, alike in markings, their underside red or ochreous, with black bands: forewing acute, and often falcate at the apex. Body robust; palpi most often long, more or less ascending; antennæ long, serrate or simple. (*Guénée.*)

Genus SPIRAMA.

Spirama, Guénee, Noct. iii. p. 194 (1852).
Spiramia, Walker, Catal. Lep. Het. B. M. xiv. p. 1318 (1858).
Speiredonia (part), Hübner, Verz. bek. Schmett. p. 272.

Wings moderately broad, velvety: forewing elongated, triangular, costa arched towards the end, apex angular, exterior margin very slightly oblique and convex; cell extending nearly half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-sixth from base of second, and fourth beyond one-half from base of third, fifth from end of the cell and touching third close to its base; discocellular concave in the middle, bent near each end, radials from the angles; middle median from angle near end of the cell, lower at two-fifths; submedian slightly recurved from the base: hindwing short, exterior margin convex; cell less than one-third the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight; abdominal margin in male longitudinally folded between the submedian and internal vein, the fold containing a glandular tuft of fine long erectile hairs. Body stout, abdomen smooth, cylindro-conical; palpi vertical, first and second joint stout, laxly squamose, second reaching to middle of the eyes, third joint slender, lanceolate, one-third length of second; antennæ long, minutely serrated and ciliated in male, setaceous in female; legs stout, femora pilose beneath, spurs long.

Type, S. retorta.

SPIRAMA COHÆRENS (Plate 165, Fig. 3, 3*a*, ♂ ♀).

Spirama cohærens, Walker, Catal. Lep. Het. B. M. xiv. p. 1321 (1858).

Male. Olivaceous greyish-brown, in some aspects violaceous greyish-brown, darkest towards the base: forewing with an indistinctly defined subbasal, medial, and a discal transverse blackish line, each line angled outward below the costa, followed by two less distinct submarginal denticulated lines; at the end of the cell is a black-lined retort-shaped mark, which is white lined on its outer side; middle of the upper radial and lower subcostal vein also black lined: hindwing with obsolescent traces of discal and submarginal lines. Underside of wings uniformly brown, with

three outer transverse slightly darker bands. Thorax, head, palpi, and legs dark brown; abdomen with broad continuous dorsal purplish-black bands, tip, sides and beneath, and fringe of legs vermilion.

Female. Olivaceous ochreous-brown, tinged with violaceous-brown in some lights: forewing with a transverse oblique pale ochreous-centred blackish subbasal band, which is confluent with a shorter band below the cell; a curved discal black line, followed by a shorter similar line; a prominent black pale-bordered retort-shaped mark, a discal sinuous line with pale outer border, the two latter crossed by the black-lined upper radial and lower subcostal veins; beyond are two submarginal blackish waved lines, followed by two marginal sinuous lines; a subapical whitish longitudinal streak extending from the lobe of the retort-mark, and the two upper subcostal veins are also subapically lined with white: hindwing with two black medial transverse bands, a pale-bordered discal sinuous line, a prominent black pale outer-bordered submarginal band, followed by a slightly waved outer submarginal line and two sinuous marginal black lines. Thorax, base of abdomen, head, palpi, and legs olivaceous ochreous-brown, with a blackish-brown band in front of thorax and across the tegulæ; abdomen vermilion, with black dorsal bands. Underside vermilion-red, with three narrow outer transverse blackish bands, a discocellular spot, and a marginal row of dentate spots.

Expanse $2\frac{3}{4}$ to 3 inches.

SPIRAMA HELICINA (Plate 165, Fig. 4, 4*a*, ♂ ♀).

Speiredonia Helicina, Hübner, Zuträge, Samml. Exot. Schmett. iii. 14, 219, fig. 437-8 (1825), ♀.
Spirama Helicina, Guénee, Noct. iii. p. 197 (1852).
Spiramia Helicina, Walker, Catal. Lep. Het. B. M. xiv. p. 1320.

Male. Smaller and of a darker colour than *S. cohærens*: forewing with a pale-bordered more distinct black subbasal angled line, and more prominent discal sinuous line, followed by four outer sinuous lines: hindwing also with more distinct blackish transverse medial and three outer bands.

Female also smaller than *S. cohærens*, much paler: forewing with a more prominent pale-centred subbasal band, with broader outer confluent band below the cell; the retort-mark, discal bands, and submarginal lines with much paler borders: hindwing also with more prominent and paler-bordered black medial bands, discal line, and the submarginal band with a distinctly formed sinuous outer border, followed by a sinuous line, and the two outer sinuous lines. Body similar to *S. cohærens*. Underside similarly coloured; with the inner and outer blackish band broader.

Expanse $2\frac{1}{4}$ to $2\frac{1}{2}$ inches.

Genus HYPOPYRA.

Hypopyra, Guénee, Noct. iii. p. 198 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1322.
Maxula, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1096 (1865).

Wings broad: forewing triangular, costa almost straight, apex slightly produced and falcate, exterior margin convex in the middle; cell extending about two-fifths the length; first subcostal emitted at nearly one-half before end of the cell, second about one-eighth, trifid, third at one-fifth from base of second, fourth at two-thirds from base of third, fifth from end of the cell and touching third at its base; discocellular concave, bent at each end, radials from the angles; middle median from close to end of the cell, lower at one-third; submedian recurved from the base: hindwing short, triangular, exterior margin convex; cell one-third the length; two subcostals from end of the cell; discocellular slender, concave, radial from close to lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body moderately stout, abdomen smooth, tapering towards the tip in male, cylindro-conical in female; palpi ascending, second joint rather broad and reaching the vertex, compressed, laxly squamose, third joint lanceolate, half length of second; second and third joints more slender in female: antennæ rather thick, ciliated; legs stout, pilose, spurs long.

Type, H. unistrigata.

HYPOPYRA PALLIDA (PLATE 166, FIG. 1, 1*a*, ♂ ♀).

Hypopyra pallida, Moore, P. Z. S. 1883, p. 26.

Male. Similar to *H. vespertilio*. Much paler in colour: forewing with the subbasal transverse fascia less curved; oblique medial lines darker, the contiguous and outer sinuous fasciæ more distinct, and the marginal lunular line less defined; three prominent small black spots encircled by greyish-white, and an indistinct discocellular lunule: hindwing with two distinct brown medial lines, and a duplex contiguous sinuous line with black points, two distinct outer sinuous fasciæ, and a marginal lunular brown line.

Female. Much paler than the same sex of *H. vespertilio;* the markings indistinct: forewing with three small indistinct black-centred grey-bordered spots, and slender discocellular lunule.

Expanse, ♂ $2\frac{3}{4}$, ♀ 3 inches.

Genus CYCLODES.

Cyclodes, Guénee, Noct. iii. p. 27 (1852).
Beregra, Walker, Catal. Lep. Het. B. M. xiv. p. 1315 (1858).

Forewing elongated, triangular, costa almost straight, apex pointed, exterior margin oblique, slightly convex and moderately scalloped; cell long, extending to

half the length; first subcostal emitted at nearly one-half before end of the cell, second at one-fourth, trifid, third at one-fourth from base of second, and fourth at one-fifth from base of third; fifth from end of the cell and touching third near the base; discocellular inwardly oblique, concave in middle, bent close to each end, radials from the angles; middle median from angle near end of the cell, lower at one-third before the end; submedian recurved from the base, and with a lower vein emitted from its base and joining it at one-fourth its length: hindwing short, broad, triangular; apex very convex, exterior margin slightly scalloped; cell extending to about one-third the length; two subcostals emitted from end of the cell; discocellular convex, radial from below the middle; two upper medians from end of the cell, lower at one-third; submedian recurved from the base, internal vein straight. Body very stout, thickly clothed; palpi vertical, first and second joints stout, laxly squamose, second joint reaching to level of the vertex, third joint clavate, one-fourth length of second in male, and nearly of same length as second in female; antennæ extremely long, simple; legs stout, slightly pilose, spurs long, tarsal spines stout.

CYCLODES OMMA (Plate 160, Fig. 7, ♀).

Erebus Omma, Van der Hoeven, Tijd. voor Nat. Gesch. vii. p. 281, pl. 7, fig. 7, *a*, *b* (1840).
Cyclodes Omma, Guénee, Noct. iii. p. 27 (1852).
Beregra replenens, Walker, Catal. Lep. Het. B. M. xiv. p. 1315 (1858).

Male and female. Forewing æneseent olivaceous-green basally, the outer border pale violaceous-grey and numerously speckled with violet-brown scales; crossed by an antemedial dark violet-black pale-bordered lunular duplex line, which encloses a round jet-black ring across middle of the cell, the ring being slenderly interlined with silvery-blue; a violet-black angulated medial fascia, two discal pale-bordered denticulated lines, followed by two outer pale-bordered angulated incomplete fasciæ, and a marginal lunular line: hindwing violaceous greyish-brown, tinged with olivaceous externally; crossed by a recurved discal greyish-white bordered violet-brown line, followed by a metallic-blue speckled short black fascia from the anal angle, beyond which the outer border is greyish-white, and traversed by a black slender interciliary line; a violet-brown streak ascends obliquely above the recurved discal line. Body æneseent olivaceous-green, violaceous-grey in some aspects; thorax, and base of abdomen dorsally, with violet-brown bands; palpi olivaceous; forelegs with olive-brown bands.

Expanse $2\frac{1}{4}$ to $2\frac{3}{4}$ inches.

Genus ENTOMOGRAMMA.

Entomogramma (Sect. 1), Guénee, Noct. iii. p. 203 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1330.

Wings short, broad: forewing slightly convex towards the end, apex pointed and slightly falcate, exterior margin convex and slightly undulating; cell extending

to half the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third from near base of second and fourth at four-fifths from base of third, fifth from end of the cell and touching third close to its base; discocellular concave, radials from upper end and near lower end; middle median from angle near end of the cell, lower at two-fifths before the end; submedian recurved from the base: hindwing very broad, exterior margin convex, abdominal margin long; cell one-third the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at two-fifths before the end; submedian and internal vein straight. Body moderate; abdomen slender in male; palpi ascending, second joint reaching vertex, rather broad, compactly squamose, third joint lanceolate, half length of second; antennæ long, ciliated; legs long, fore femora and tibiæ densely pilose, middle and hind femora slightly pilose beneath, hind tibiæ rather long, spurs long.

Type, E. fautrix.

ENTOMOGRAMMA POSTSTRIGARIA.

Entomogramma poststrigaria, Walker, Catal. Lep. Het. B. M. xxxiii. p. 949 (1865), ♂.

"Male. Brownish-cinereous. Wings narrow, rather long; marginal festoon black: hindwing with an exterior testaceous brown-bordered slightly undulating line, which is accompanied on the inner side hindward by a deep black streak. Antennæ stout, broad, not more than half length of the body; abdomen extending very little beyond the hindwings.

"Expanse 10 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's Collection.

Genus TARAMINA.

Entomogramma (Sect. 2), Guénee, Noct. iii. p. 204 (1852).

Wings similar in form and venation to typical Entomogramma. Differs in the male having the antennæ thick at the base, dilated, contorted, and flattened in the middle of its length, its inner side being strongly pectinated to two-thirds of the length, and the outer side minutely pectinated from the contortion; antennæ in female setaceous; legs long, fore femora and tibiæ densely pilose, middle and hind femora slightly pilose beneath, hind tibiæ shorter and thicker than in *E. fautrix*, spurs long.

TARAMINA TORSA (Plate 166, Fig. 2, ♂).

Entomogramma torsa, Guénee, Noct. iii. p. 204 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1331.
Entomogramma squamicornis, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 116, fig. 3 (1874), ♂.

Lilacine ochreous-grey: forewing with a transverse inwardly oblique slender blackish antemedial, and a medial line, followed by a pale ochreous-bordered brown

discal line, each line elbowed outward below the costa; from the base to apex extends a pale ochreous-bordered brown subcostal line; at end of the cell is a blackish ovate spot; between the middle and outer line is a pale-bordered blackish denticulated line, and a less defined similar line also along the submargin, both of these lines being more distinct in the female: hindwing with a medial transverse slender blackish line, a discal pale ochreous-bordered brown line, and an intermediate inner and outer denticulated line; a slender pale ochreous interciliary line also on both wings. Thorax in front with a brownish-ochreous band; palpi, and legs above greyish.

Expanse, ♂ $2\frac{1}{8}$, ♀ 2 inches.

Genus ORTOSPANA.

Ortospana, Walker, Catal. Lep. Het. B. M. xxxiii. p. 950 (1865).

"Allied to *Hypopyra*. Male: wings ample: forewings falcate, convex along the costa; exterior border nearly straight, rather oblique: hindwings broad, subcaudate. Body moderately stout; proboscis short; palpi compressed, vertical, rising a little higher than the vertex, second joint pilose in front, third joint linear, acute at the tip, less than half length of the second; antennæ slightly pectinated, serrated towards the tip; abdomen long, lanceolate, not extending as far as the hindwings; legs rather short."

ORTOSPANA CONNECTENS.

Ortospana connectens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 950 (1865).

"Male. Testaceous: forewings pale ochreous, very slightly speckled with black, with opaline reflections from the reniform mark to the submarginal line; testaceous-white between the latter and the extreme border; a reddish slightly undulating line interrupted by the reniform mark; a few slight exterior brown marks; submarginal line brown, straight, oblique, obsolete towards the costa; orbicular and reniform marks pale yellow, the former punctiform, the latter very large and narrow in front, slightly excavated on the outer side: hindwings luteous, yellow with an opaline lustre exteriorly; a very irregular brown partly reddish submarginal band, which is interlined hindward and accompanied by a marginal white line; a few black speckles. Underside of forewings with two large brown transverse marks: hindwings with two short transverse brown lines towards the interior border. Palpi brown on the outer side.

"Expanse 25 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

Family BENDIDÆ.

Wings robust, often broad, alike in colour and markings: forewing acute at the apex: hindwing angular. Body moderately stout, palpi ascending, apex generally long and linear; antennæ slender, rarely pubescent. (*Guénee.*)

Larva cylindrical, half-looped; with sixteen legs, the first middle pair being imperfect; two dorsal pointed tubercles on twelfth segment.

Genus HULODES.

Hulodes, Guénee, Noct. iii. p. 207 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1334.
Bendis (part), Hübner, Verz. bek. Schmett. p. 269.

Wings moderately large, broad: forewing triangular, much arched towards the end; apex acute, exterior margin oblique, slightly scalloped, posterior angle convex; cell extending to one-third the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at one-sixth from base of second, and fourth at three-fifths from base of third, fifth from end of the cell and joined by a short spur to third near its base; discocellular inwardly oblique, deeply concave in the middle, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at about one-half before the end; submedian almost angular near the base and with a slender vein extending from below the base to the angle: hindwing short, broad; exterior margin sinuous, slightly angular in the middle; cell extending to one-third the length; two subcostals on a short footstalk beyond end of the cell; discocellular deeply concave, radial from near lower end; two upper medians from end of the cell, lower about one-third; submedian and internal vein straight. Body stout, thorax densely clothed, abdomen pointed at the tip; palpi ascending, second joint stout, curved, laxly squamose, reaching level of the eyes, third joint in male very short, conical, in female slender, one-third length of second; antennæ simple, slender; legs stout, most densely clothed with woolly tufts, base of fore and middle tarsi tufted above, and hind tarsi tufted to tip in male, naked in female, spurs long.

Type, H. Caranea.

HULODES CARANEA (PLATE 166, FIG. 3, 3*a*, ♂ ♀; 167, FIG. 6, larva).

Phalæna Noctua Caranea, Cramer, Pap. Exot. iii. p. 140, pl. 269, fig. E, F (1782), ♂.
Bendis Caranea, Hübner, Verz. bek. Schmett. p. 269.
Hulodes Caranea, Guénee, Noct. iii. p. 208; Walker, Catal. Lep. Het. B. M. xiv. p. 1335.

Pale umber-brown, sparsely speckled with minute dark brown scales: forewing with indistinct traces of a blackish-speckled zigzag lunular transverse subbasal line, and a similar medial line; a constricted ochreous-yellow reniform mark, and a blackish orbicular punctiform spot. *Male*. Both wings with a pale brownish-grey

marginal border, the inner edge of which is straight, clearly defined, and bordered by a slender brownish line; a row of small black marginal points. *Female.* Both wings with a discal faintly paler fascia, and with two straight dark brown submarginal lines, the inner line most prominent, the outer border being of the same colour as the other parts. Body, head, palpi, and legs pale umber-brown.

Expanse $2\frac{3}{4}$ to $3\frac{1}{4}$ inches.

Larva semi-looped, with sixteen legs, the first middle pair imperfect; with two pointed tubercles on twelfth segment. Adult stage before pupating: colour olive-green above, paler beneath, with darker speckles, and a dorsal and lateral band of confluent blackish speckles; stigmata black; some greyish-white blotches along the back and sides. Pupa red.

"Feeds on Acanthads." (*Thwaites.*)

Family DYSGONIIDÆ.

Ophiusidæ, Guénee, Noct. iii. p. 220 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1343.

Imago of moderate size, or often large: forewing acute at the apex, occasionally subfalcate. Palpi ascending; antennæ of male never pectinated, often crenulate, with fine setæ. (*Guénee.*)

Larva elongated, semi-looped, attenuated at the extremities; with sixteen legs, the first pair and sometimes also the second pair of middle legs being rudimentary; generally with two acute dorsal tubercles on twelfth segment. Pupa formed among living leaves.

Genus SPHINGOMORPHA.

Sphingomorpha, Guénee, Noct. iii. p. 220 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1344.

Forewing elongated, triangular, rather narrow; apex pointed, exterior margin very oblique and slightly scalloped; cell narrow, long, extending half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, third at one-fifth from base of second, and fourth at one-half from base of third, fifth from end of the cell and slightly touching third close to its base; discocellular inwardly oblique, concave, radials from upper end and close to lower end; middle median from angle close to end of the cell, lower at two-fifths; submedian almost angular near the base and emitting a short slender lower spur from the angle: hindwing short, broad, exterior margin slightly scalloped, angular in the middle, cell extending nearly half the length; two subcostals from end of the cell; discocellular outwardly oblique, concave, radial from near lower end; two upper medians from end of the cell, lower at one-fifth; submedian and internal vein straight. Body very stout, woolly, tegulæ pointed; abdomen long in male; palpi stout, vertical, second

joint curved, reaching vertex, smoothly squamose, third joint long, slender; antennæ stout, ciliated in male; legs long, femora and tibiæ densely pilose in male, tarsi very long, spurs long.

Type, S. Chlorea.

SPHINGOMORPHA CHLOREA (PLATE 167, FIG. 4).

Phalæna Noctua Chlorea, Cramer, Pap. Exot. ii. p. 12, pl. 104, fig. c (1779).
Sphingomorpha Chlorea, Guénee, Noct. iii. p. 222 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1345.
Sphingomorpha Sipyla, Guénee, Noct. iii. p. 222 (1852), pl. 21, fig. 4.

Dark umber-brown: forewing with numerous transverse pale brownish-ochreous bordered blackish strigæ; crossed by a zigzag subbasal white-bordered black line, an undulated medial line, and a black-bordered pale brownish-ochreous sinuous line; reniform mark slender, curved, black lined and pale bordered; a pale-bordered black recurved longitudinal streak from upper end of the reniform, and above which are two whitish-bordered black lunules; a pale-bordered streak also at the apex: hindwing blackish umber-brown, with a pale brownish-ochreous transverse medial fascia, which is broadest in the female; a narrow apical band, and a broader subanal band, the latter with blackish strigæ; cilia at the apex and anal angle pale brownish-ochreous. Body above dark umber-brown, with a pale brownish ochreous-white dorsal band extending from front of the head to end of the abdomen, and crossed by narrow segmental brown bands, the sides, and body beneath, with the femora and tibiæ, pale brownish-ochreous; tarsi dark brown with pale bands; base of palpi blackish-brown.

Expanse $2\frac{1}{2}$ to $2\frac{3}{4}$ inches.

Genus THYAS.

Thyas, Hübner, Samm. Exot. Schmett. ii. pl. f. 1, 2 (1820-26).
Lagoptera, Guénee, Noct. iii. p. 223 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1350.
Bendis (part), Hübner, Verz. bek. Schmett. p. 269.

Wings moderately large, strong, elongated; costa almost straight, apex acute, exterior margin slightly oblique, convex hindward; cell extending to nearly half the length; first subcostal emitted about one-half before end of the cell, second at one-seventh, trifid, third at one-fourth from base of second, and fourth at one-half from base of third, fifth from end of cell; discocellular convex, bent near each end, radials from the angles; middle median from angle close to end of cell, lower at nearly one-half; submedian recurved from the base, and with a slender short lower recurved veinlet: hindwing broad, short, apex and exterior margin very convex; cell extending one-third the length; two subcostals from end of cell; discocellular very oblique, convex, lengthened outwardly, radial from below the middle; the middle median from angle close to end of cell, lower at one-fourth; submedian slightly recurved,

and in the male with a fringe of long hairy scales along its entire length beneath; internal vein straight; between the submedian and internal vein is a lengthened fold on the upperside, containing long silky erectile radiating hairs. Body very stout; thorax broad; tegulæ long and pointed in male; palpi stout, compactly squamose, second joint long, curved, reaching vertex; third joint very short, thick and conical in male, long and slender in female; antennæ ciliated in male, simple in female; legs very stout, femora and tibiæ densely clothed with short woolly hairs beneath, hind femora and tibiæ entirely covered in male; spurs long.

Type, T. honesta.

THYAS HONESTA (Plate 167, Fig. 2).

Thyas honesta, Hübner, Samml. Exot. Schmett. ii. Index, p. 4, pl. fig. 1, 2 (1820-26).
Lagoptera honesta, Guénee, Noct. iii. p. 224 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1352.
? *Noctua microrhœa*, Fabricius, Ent. Syst. iii. 2, p. 17 (1794).

Forewing yellowish-ferruginous or purplish-ferruginous, sparsely flecked with black scales; crossed by an outwardly-oblique antemedial very indistinct ferruginous-red white-speckled sinuous line, and an inwardly-oblique postmedial similar line, the points of each line being most distinctly white speckled; a white-speckled blackish sinuous line curving prominently from the apex and ending indistinctly at the posterior angle; a marginal row of black points; across the disc between the two lines is a pale zigzag fascia, and on the outer border are two erect purplish-grey fasciæ; orbicular spot punctiform, greyish-white; reniform mark prominent greyish-white, constricted or broken, and more or less centred with jet black: hindwing vermilion-red, with a medial discal black wavy-bordered pyriform spot, below which are some grey and black speckles. Thorax, head, and palpi yellowish-ferruginous or purplish-ferruginous; palpi tinged with vermilion beneath; fore and middle femora above, and all the tarsi dark hoary-grey, hairs beneath red; abdomen vermilion-red.

Expanse $3\frac{1}{2}$ to $3\frac{3}{4}$ inches.

THYAS CORONATA (Plate 167, Fig. 1; 166, Fig. 5, larva).

Noctua coronata, Fabricius, Syst. Ent. p. 596 (1775).
Noctua leonina. Fabricius, *id.* p. 596.
Noctua ancilla, Fabricius, Ent. Syst. iii. 2, p. 17 (1794).
Corycia magica, Hübner, Zuträge, Samml. Exot. Schmett. iii. 32, 268, fig. 535-6 (1825).
Lagoptera magica, Guénee, Noct. iii. p. 225 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1352.

Forewing purplish ferruginous-brown, numerously flecked with minute black scales; crossed by an outwardly-oblique pale-bordered dark brown waved subbasal line and a similar antemedial line, an inwardly-oblique postmedial line with a slightly denticulated inner border, the two latter lines joining along the posterior margin; a

recurved submarginal line, and a marginal row of black points; from the costa between the two inner lines, and also between the outer lines, the ground colour of the wing is clouded with darker brown; orbicular spot composed of a small rounded brown ring with an ochreous greyish-white centre; reniform mark large, either entirely black and bordered by an ochreous greyish-white line, or broken up into seven or eight white-lined black spots; sometimes both the orbicular and reniform are obsolescent, or defined only by the brown outer line, in others they both have an olive-grey centre: hindwing dark yellow, with an inner and outer discal broad black band, both directed and tapering towards the anal angle. Thorax, head, palpi and legs above, purplish ferruginous-brown; tarsi greyish-brown; abdomen dark yellow, with black dorsal bands.

Expanse $2\frac{3}{4}$ to $3\frac{1}{2}$ inches.

Adult larva elongated, half-looped; with sixteen legs, the first middle pair aborted and unfit for walking; head large; a pair of short black dorsal tubercles on eleventh and twelfth segments; colour dull sienna-brown, longitudinally striped with blackish-brown; a blackish spot on back of ninth segment, and a yellowish-bordered lateral spot on sixth segment; under surface blackish-brown; legs testaceous-yellow; head striped with black. Pupa purplish-black.

"Feeds on Quisqualis indica."

Genus MINUCIA.

Ascalapha,* Hübner, Tentamen, p. 2 (1806).

Ophiodes,† Guénee, Ann. Soc. Ent. Fr. x. p. 77 (1852); Noct. iii. p. 227; Walker, Catal. Lep. Het. B. M. xiv. p. 1353.

Phoberia (part), Hübner, Verz. bek. Schmett. p. 267.

Pseudophia (part), Lederer, Noct. Eur. p. 200.

Ophiusa (Sect. B), Ochsenheimer, Schmett. Eur. iv. p. 93.

Forewing rather long, costa almost straight, apex angled, exterior margin slightly oblique and scalloped; cell extending half the length; first subcostal emitted at one-third before end of the cell, second at one-sixth, trifid, third from very near base of second, fourth at two-thirds from base of third, fifth from end of the cell and slightly touching third near its base; discocellular bent in the middle and at each end, radials from upper and lower angles; middle median from angle close to end of the cell, lower at one-third before the end; submedian recurved: hindwing longer than broad, exterior margin convex and slightly scalloped; cell extending one-third the length; two subcostals from end of the cell; discocellular concave, oblique posteriorly, radial from near the lower end; two upper medians from end of the

* Used by Fabricius in 1776 for a genus of Neuroptera.

† Used by Wagler in 1828 for a genus of Reptiles.

cell; lower at one-fifth; submedian and internal vein straight. Body stout, thickly clothed; palpi stout, obliquely ascending, compressed, laxly squamose, second joint reaching level of the eyes, third joint cylindrical, about half length of the second; antennæ simple, minutely ciliated; legs rather long, femora very pilose, middle and hind tibiæ minutely spined, spurs slender.

Type, M. lunaris.

MINUCIA DISCRIMINANS (Plate 166, Fig. 4).

Ophiodes discriminans, Walker, Catal. Lep. Het. B. M. xiv. p. 1358 (1858).

Male and female: forewing pale brownish-ochreous, brightest coloured externally; indistinctly speckled with a few brown scales; transverse lines nearly obsolete, being indicated only by an indistinct postmedial recurved series of speckled-brown lunules, and a less distinct submarginal zigzag row, the latter ending at the upper end in two brown-speckled white lunules and a few brown speckles from the apex; a marginal row of indistinct brown points; an indistinct orbicular ring-dot and a faintly defined reniform mark: hindwing pale ochreous-yellow, with a broad dusky black outer discal band, which is broadest in the female. Thorax and head pale brownish-ochreous, abdomen ochreous-yellow; palpi and tarsi greyish-brown.

Expanse $2\frac{3}{4}$ inches.

MINUCIA PRUNICOLOR (Plate 167, Fig. 3).

Male: forewing purple brown, slightly purplish-grey at the base and on the outer border; very sparsely speckled with darker brown scales; crossed by an indistinct brown outwardly-oblique antemedial line, and an inwardly-oblique curved postmedial line, both lines joining on the posterior margin; a dark brown submarginal duplex line, the inner border of which is strongly defined, diffused, and forming a darker fascia; a very slender brown sinuous marginal line; orbicular defined by a brown dot, reniform mark slender, indistinctly brown: hindwing pale brownish-ochreous, with a broad dusky brown discal band. Thorax and head purple-brown; palpi and legs dull brown; abdomen brownish-ochreous.

Female: forewing darker coloured, with the antemedial and postmedial line more distinctly defined.

Expanse, ♂ 2, ♀ $2\frac{1}{4}$ inches.

MINUCIA TRAPEZIUM.

Ophiodes trapezium, Guénee, Noct. iii. p. 231 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1360.
Ophisma cognata, Walker, *id.* xxxiii. p. 958 (1865).

Male: forewing pale olivaceous ochreous-yellow, slightly suffused with purplish-ochreous, the outer border also being purplish-brown; very sparsely speckled with minute brown scales; crossed by an outwardly-oblique antemedial slender brown

line, and a curved waved inwardly-oblique postmedial line, followed by a dark brown submarginal duplex line, and a marginal slender sinuous line; a brown orbicular dot, and well-defined dark-centred reniform mark: hindwing very pale brownish-ochreous, with a broad dusky brown outer discal band, and a well-defined brown sinuous marginal line. Thorax and head olivaceous ochreous-yellow, palpi and tarsi greyish-brown; abdomen very pale brownish-ochreous.

Expanse $2\frac{1}{4}$ to $2\frac{1}{2}$ inches.

Genus OPHISMA.

Ophisma, Guénee, Noct. iii. p. 236 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1367.
Platyja et *Dysgonia* (part), Hübner, Verz. bek. Schmett. p. 268-9.

Wings broad: forewing triangular, apex acute, subfalcate, exterior margin even, oblique; cell long, slightly more than half the length; first subcostal emitted about one-third before end of the cell, second at one-eighth, trifid, third at one-fourth from base of second, fourth at two-thirds from base of third, fifth from end of the cell and joined by a short spur to third near its base; discocellular inwardly oblique, concave, bent at each end, radials from the angles; middle median from angle near end of the cell, lower at one-third; submedian slightly curved; hindwing short, apex very convex, exterior margin slightly angular at end of lower median vein; cell extending two-fifths the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of cell, lower from about one-fourth; submedian and internal straight. Body stout; palpi ascending, rather stout, fusiform, laxly squamose, second joint reaching level of the eyes, third joint very short, conical; antennæ setaceous; legs stout, femora and tibiæ pilose beneath; spurs stout.

Type, O. gravata.

OPHISMA CIRCUMFERENS.

Ophisma circumferens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 956 (1865).

"Female. Fawn colour: forewings with brown lines; interior and exterior lines widely apart on the costa, converging from thence and united near the interior border, which they do not reach; submarginal line, straight, oblique, accompanied on its inner side by a diffuse brown band; hindwings dingy testaceous, with a broad diffuse submarginal brown band, which is obsolete beneath. Abdomen and underside testaceous; third joint of palpi straight, lanceolate, about half length of the second.

"Expanse 24 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

Genus MACALDENIA.

Pasipeda,* Moore, Desc. Lep. Coll. Atk. p. 171 (1882).

Forewing short, broad; with the costa slightly arched at the base and before the end, apex acute; exterior margin oblique, convex hindward; cell short, less than half the length; first subcostal emitted at one-half before end of the cell; second at one-fifth, trifid, the third from below second at one-sixth from its base above end of the cell, fourth at one-sixth before the apex; fifth from end of the cell and touching third close to its base; discocellular bent outward at each end, concave in the middle, radials from the angles; two upper medians from angles obliquely below end of the cell, lower at one-half before the end; submedian slightly curved downward from the base: hindwing short, somewhat quadrate; exterior margin convexly-angular in the middle; cell very short; costal vein nearly straight, extending to apex; two subcostals from end of the cell; discocellular concave, radial from near its lower end; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein slightly recurved. Body stout; palpi ascending, flattened, squamose, second joint long, third joint slender, two-thirds length of second; legs short, thick; antennæ simple.

MACALDENIA PALUMBA (Plate 168, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Hulodes palumba, Guénee, Noct. iii. p. 211 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1337.
Pasipeda palumba, Moore, Desc. Lep. Coll. Atkinson, p. 171 (1882).
Remigia colligens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1019 (1865).

Pale lilacine brownish-ochreous, sparsely speckled with minute brown scales: forewing crossed by a very slender indistinct blackish basal incomplete zigzag line, an erect antemedial line, and an outwardly-curved postmedial denticulated line, the points of which are mostly apparent in the female; beyond is a pale zigzag sinuous line, and a marginal row of minute black points; a brown-speckled reniform mark; the basal area from the postmedial line suffused with pale purple: hindwing paler at the base; crossed by an indistinct black-speckled medial waved line, and a discal wavy purplish-ferruginous fascia, which is posteriorly surmounted by a row of distinct white lunules; from the anal angle are disposed some brown lunules. Body, palpi, and legs pale lilacine brownish-ochreous, minutely black-speckled.

Expanse $1\frac{3}{8}$ to $1\frac{5}{8}$ inch.

Larva semi-looped; with sixteen legs, the first middle pair aborted; two dorsal conical tubercules on twelfth segment; colour brownish-ochreous above, olivaceous beneath; with dorsal longitudinal black-speckled streaks; sides also black-speckled;

* Used by Walker in 1858 for a genus of Lepidoptera.

a greyish-white sublateral line bordered above by several pinkish-grey spots; head yellowish, speckled with black; legs olivaceous. Pupa pinkish-black.

"Feeds on Citrus decumanus." (*Thwaites.*)

Genus ACHÆA.

Achæa, Hübner, Verz. bek. Schmett. p. 269 (1818-25); Guén. Noct. iii. p. 244; Walker, Catal. Lep. Het. B. M. xiv. p. 1389.

Wings broad: forewing triangular, apex acute, exterior margin oblique, almost even; cell extending half the length; first subcostal emitted at one-third before end of the cell, second at one-half, trifid, third at one-sixth from base of second, and fourth at two-thirds from base of third, fifth from end of the cell and slightly touching third near its base; discocellular concave, radials from close to upper and lower end; middle median from angle close to end of the cell, lower at nearly one-half; submedian recurved: hindwing short, apex convex, exterior margin convexly angular; cell extending one-third the length; two subcostals from end of the cell; discocellular outwardly-oblique, concave, radial from near lower end; two upper medians from extended end of the cell, lower at one-fifth; submedian and internal vein straight. Body stout; palpi moderately slender, ascending, squamose; second joint reaching level of the eyes, third joint lanceolate, one-third length of the second; antennæ simple; legs stout, pilose, hind tarsi pilose at the base, middle tibiæ with lateral spines, spurs long.

Type, A. Melicerte.

ACHÆA MELICERTE (Plate 168, Fig. 2, 2*a*, ♂ ♀, 2*b*, larva).

Phalæna Noctua Melicerte, Drury, Ins. i. p. 46, pl. 23, fig. 1 (1770); Cramer, Pap. Exot. i. pl. 62, fig. C, D; iv. pl. 323, fig. C.

Achæa Melicerta, Hübner, Verz. bek. Schmett. p. 269; Guénee, Noct. iii. p. 247; Walker, Catal. Lep. Het. B. M. xiv. p. 1396.

Noctua tigrina, Fabricius, Spec. Ins. p. 218 (1781); Ent. Syst. iii. 2, p. 40.

Male: forewing cinereous-brown, washed with violaceous-grey in some lights; sparsely speckled with darker brown scales; crossed by a more or less defined pale cinereous-bordered black basal costal line, an outwardly-oblique antemedial line, and two discal curved wavy lines, the inner one being indistinct, followed by a submarginal darker brown fascia traversed by a pale sinuous line, the inner portion of the fascia being somewhat suffused with ferruginous-brown, and ending on the costa in a paler subapical patch; reniform mark defined by an upper and lower black dot; in some specimens the area between the medial and inner discal line is lilacine white, and the latter colour also sometimes pervades the outer margin: hindwing dusky black, cinereous towards the base; with a greyish-white transverse medial band and three quadrate marginal spots.

Female: forewing generally more uniformly darker cinereous-brown, and with more or less defined transverse lines: hindwing as in male. Thorax, head, palpi, and legs above, cinereous-brown; abdomen cinereous.

Expanse 2 to $2\frac{1}{4}$ inches.

Adult larva elongated, slender, half-looped; with sixteen legs, the first pair of middle legs aborted; two dorsal red tubercles on twelfth segment; colour bluish-grey, numerously speckled with bluish-black; a lateral and a sublateral yellowish band, with an intervening bluish-grey line; spiracles and forelegs red; a dorsal black stripe bordered by reddish-white spots between fifth and sixth segments; head black striped. Pupa formed within a leaf.

"Feeds on castor oil plant, *Ricinus communis*." (*Thwaites.*)

ACHÆA SERVA (PLATE 169, FIG. 4, 4*a*, ♂ ♀, 4*b*, larva).

Noctua serva, Fabricius, Syst. Ent. p. 593 (1775).
Noctua vulpina, Fabricius, Ent. Syst. iii. 2, p. 39 (1794).
Noctua mercatoria, Fabricius, *id.* p. 62 (1794).
Achæa mercatoria, Guénee, Noct. iii. p. 246; Walker, Catal. Lep. Het. B. M. xiv. p. 1396.
Phal. Noctua melicerte, Cramer, Pap. Exot. iv. pl. 323, fig. D, E.
Achæa Ino, Hübner, Verz. bek. Schmett. p. 269 (1818-25).

Male: forewing brownish-ochreous, washed with violaceous-grey in some aspects; crossed by indistinct brown sinuous outwardly-oblique basal, antemedial, and discal duplex lines, followed by a slight brown submarginal fascia; a black punctiform orbicular spot, and ill-defined reniform mark; cilia ochreous-white: hindwing dusky black, ochreous cinereous-brown at the base; with a transverse medial greyish-white band, and three more or less defined quadrate marginal spots, the anal spot being somewhat ochreous.

Female: forewing crossed by distinct black-speckled lunular sinuous lines, and an incomplete submarginal fascia; orbicular spot and reniform mark: hindwing as in male. Thorax, head, palpi, and legs above brownish-ochreous, abdomen ochreous cinereous-brown.

Expanse 2 to $2\frac{1}{2}$ inches.

Larva elongated, semi-looped: with sixteen legs, first middle pair aborted; two dorsal ochreous tubercules on twelfth segment. Colour varied pale and dark violaceous and olivaceous-grey; numerously covered with dark violet-brown speckles; spiracles black; two violet-brown dorsal spots on fifth segment; head violet-brown in front; legs olive-grey. Pupa deep purple-brown.

"Feeds on the castor oil plant, *Ricinus communis*." (*Thwaites.*)

ACHÆA MEZENTIA (Plate 169, Fig. 1, ♂).

Phalæna Noctua mezentia, Cramer, Pap. Exot. iv. p. 70, pl. 323, fig. F (1782).
Noctua mezentina, Fabricius, Ent. Syst. iii. 2, p. 41 (1794).
Achæa mezentia, Hübner, Verz. bek. Schmett. p. 269; Guénee, Noct. iii. p. 248; Walker, Catal. Lep. Het. B. M. xiv. p. 1397.
Sypna lugens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 938 (1865), ♂.

Male and female: forewing blackish-brown, crossed by basal, medial, and discal sinuous black lines, which are broadly interspaced and bordered with either pale ochreous or cinereous-grey speckled fasciæ; a similar speckled curved apical patch; a dark brown punctiform orbicular spot, and a reniform mark; a marginal row of black-tipt white points: hindwing dusky black, tinged with blue at the base; with a large broad cinereous-white apical band. Thorax and head dark brown, speckled with cinereous scales; palpi and legs above cinereous-brown; abdomen dark brown, tinged with blue.

Expanse $1\frac{7}{8}$ to $2\frac{3}{8}$ inches.

ACHÆA REVERSA (Plate 169, Fig. 2, ♂, 2*a*, larva).

Achæa reversa, Walker, Catal. Lep. Het. B. M. xiv. p. 1399 (1858), ♀.

Male and female: forewing dark brown, numerously covered with uniformly disposed cinereous-grey speckles; crossed by an indistinct blackish discal sinuous line, and a marginal row of black-tipt white points: hindwing dusky black, tinged with blue; with a broad cinereous-white apical band. Body dark brown; thorax, head, palpi, and legs above, grey-speckled; abdomen tinged with blue.

Expanse $2\frac{1}{8}$ to $2\frac{4}{8}$ inches.

Larva elongated; with sixteen legs; two yellowish dorsal pointed tubercles on twelfth segment; colour olivaceous-grey, with a paler lateral band, pinkish beneath; numerously covered with slender black longitudinal lines; head yellowish, with slender black marks; legs pinkish. Pupa purplish-black.

"Feeds on Carthium." (*Thwaites.*)

This may be a varietal form of *A. mezentia*.

ACHÆA COMBINANS (Plate 169, Fig. 3).

Achæa combinans, Walker, Catal. Lep. Het. B. M. xiv. p. 1399 (1858).

Male and female: forewing violet-brown; crossed by faintly defined glaucescent fasciæ; a slightly darker brown orbicular dot and reniform mark; a purplish-ochreous apical costal patch, which is excavated below the tip: hindwing violet-brown, with a broad bright yellow transverse apical band. Body, palpi, and legs above, violet-brown; legs with pale yellow bands.

Expanse, ♂ $1\frac{5}{8}$, ♀ $1\frac{6}{8}$ inch.

Genus SERRODES.

Serrodes, Guénee, Noct. iii. p. 251 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1402.

Forewing elongated, triangular; costa arched towards the end, apex pointed, exterior margin oblique, scalloped; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at one-sixth from base of second, fourth at two-thirds from base of third, fifth from end of the cell and joined to third by a short spur near its base; discocellular bent in the middle and close to each end, radials from upper and lower angles; middle median from angle near end of the cell, lower at two-fifths; submedian much recurved from the base: hindwing short, broad, exterior margin convex, scalloped; cell one-third the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and interval straight. Body very stout, abdomen tufted at the base, long in the male, and with a divergent anal tuft; palpi ascending, laxly squamose, second joint stout, reaching level of the eyes, third joint linear, one-fourth length of the second in male, one-half in the female; antennæ stout, setaceous; legs stout, both sexes densely pilose, middle and hind tibiæ thick, spurs long.

Type, S. Campana.

SERRODES CAMPANA (Plate 167, Fig. 5, ♀, 5*a*, larva).

Serrodes Campana, Guénee, Noct. iii. p. 252, pl. 21, fig. 6 (1852), ♂; Walker, Catal. Lep. Het. B. M. xiv. p. 1402.

Male and female. Umber-brown: forewing with a black transverse outwardly oblique short basal irregular angulated band, an irregular angulated subbasal line with a broad black costal end and a broad black triangular patch below the cell; a transverse discal duplex pale bordered line, which is bent inward at the costal end and there terminates in a dilated black patch, the line being also outwardly diffused with black, beyond which is an incomplete submarginal black-speckled zigzag fascia; a black punctiform orbicular spot and a large pale-bordered black reticulated reniform mark, the area above the latter being ferruginous-brown, and the remaining portion of the area between the subbasal and discal line being pale ochreous-brown, this colour being also palest in the male: hindwing dusky brown, with a pale ochreous curved discal slender fascia from the anal angle; cilia at the apex and anal angle also pale ochreous. Thorax and abdomen dusky brown; collar, front of head, palpi, and forelegs above ferruginous-brown.

Expanse 3 inches.

Larva thick, semi-looped, with sixteen legs; two pointed dorsal tubercules on twelfth segment; colour bluish-grey, numerously speckled with black; two pale pink

lateral bands on middle segments; a transverse dorsal irregular black streak ending in a lateral spot on fifth segment, the streak being anteriorly bordered by yellow and by a pale lateral spot, the latter spot being continued along the fourth segment; head yellowish, black speckled. Pupa thick, truncated in front, dark purplish-red.

Genus NAXIA.

Naxia, Guénee, Noct. iii. p. 254 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1403.

Male and female: forewing short, broad, costa slightly arched, apex acute, exterior margin very slightly oblique; cell extending half the length; first subcostal emitted at two-fifths before end of the cell, second at one-eighth, trifid, third at one-sixth from base of second, fourth at two-thirds from base of third, fifth from end of the cell and slightly touching third near the base; discocellular inwardly oblique, concave, bent at each end, radials from the angles; middle median from close to end of the cell, lower at two-fifths before the end; submedian recurved: hindwing broad, somewhat quadrate, apex convex, exterior margin slightly angular at end of lower median; cell extending two-fifths the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein straight. Body stout; palpi stout, ascending, second joint laxly squamose, reaching to level of the vertex, third joint short, thick and conical in male, more slender in female; antennæ setaceous; legs stout, clothed in the male with dense woolly hair, base of posterior tarsi also hairy.

Type, N. absentimacula.

Larva elongated, slender; semi-looped; with the first and second pair of middle legs imperfect; two narrow dorsal tubercles on twelfth segment.

NAXIA ABSENTIMACULA.

Naxia absentimacula, Guénee, Noct. iii. p. 255 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1404.

Male and female: forewing pale umber-brown; crossed by an outwardly-oblique slender lilacine-grey bordered darker brown subbasal line, an antemedial line, and a medial line, the two former almost straight, the latter undulated, followed by a similar inwardly-oblique discal line, which is also slightly undulated and angled outward below the costa; beyond is a submarginal indistinct pale-bordered sinuous brown fascia with white-tipt points on the veins; the transverse medial area, and outer border is suffused with lilacine-grey: hindwing pale dusky brown, with an indistinct lilacine-grey discal band, and speckled fasciæ from anal angle; cilia paler. Body, palpi, and legs umber-brown.

Expanse $1\frac{5}{8}$ to $1\frac{7}{8}$ inch.

NAXIA CALEFACIENS (Plate 168, Fig. 3, ♂).

Naxia calefaciens, Walker, Catal. Lep. Het. B. M. xiv. p. 1405 (1858).

Male and female: forewing ferruginous-brown; crossed by a slender lilac-bordered brown subbasal line and an antemedial line, a more prominent medial straight inwardly-oblique line, which has a broadly diffused purplish-lilacine white inner border in the male, and is broadly bordered on both sides with lilacine-white in the female; a zigzag brown sinuous discal line, followed by the marginal lilacine-white border; a punctiform white orbicular spot: hindwing dusky brown, with a slender indistinct lilacine discal, subanal and marginal fasciæ. Cilia pale lilacine-brown. Thorax, head, palpi, and legs brown; abdomen greyish-brown, tarsi blackish, with pale bands.

Expanse, ♂ $1\frac{7}{8}$, ♀ $2\frac{1}{8}$ inches.

Genus DELGAMMA.

Male: forewing narrower and more triangular in form than in typical *Naxia*; apex more acute, exterior margin very oblique, posterior margin short; venation similar, except that the submedian is very much more recurved: hindwing much shorter, the costa much arched, smooth and nacreous along the upper side, exterior margin not angular; costal and subcostal anastomosed for a short distance from the base of the cell; subcostal branches recurved from end of the cell; discocellular extremely slender, concave, the radial and two upper medians diverging from a foot-stalk half-way beyond end of the cell, lower median from immediately before end of the cell; submedian and internal vein straight, base of median and submedian line with silky hairs above. Veins of the hindwing in the female in their normal position. Thorax broad, frontal tuft pointed; abdomen attenuating to the tip; palpi less robust, more laxly squamose, third joint longer, lanceolate; legs slightly pilose; antennæ ciliated.

Type, D. calorifica.

DELGAMMA CALORIFICA (Plate 168, Fig. 4, 4*a*, ♂ ♀).

Naxia calorifica, Walker, Catal. Lep. Het. B. M. xiv. p. 1406 (1858).

Male and female. Purplish-brown: forewing washed with purplish-grey; crossed by an indistinct brown outwardly-oblique waved subbasal line, an antemedial line, and a sharply defined inwardly oblique discal slightly denticulated blackish line, which is outwardly bordered by a slender greyish-white line, followed by a submarginal sinuous pale brown line ending in a dark brown curved apical spot; a marginal row of pale points; a black punctiform orbicular spot, and a brown lunular reniform mark; the outer border from the discal line pale lilacine greyish-brown: hindwing purplish-brown, the costal border pale cinereous-brown; a sharply defined

greyish-white bordered discal line, which is evanescent at the upper end, and is bordered from the anal angle by a short sinuous lilacine-white and brown scaled fascia, beyond which is a marginal row of whitish points. Body purplish-brown; palpi and forelegs above dark olivaceous-brown; middle and hindlegs greyish-brown.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{5}{8}$ inch.

Genus CARANILLA.

Male and female: forewing shorter, broader, and more triangular than in typical *Naxia;* costa straight, apex very acute, exterior margin oblique and slightly convex: hindwing short, more triangular, the exterior margin very oblique, and convexly angular at the end of lower median vein. Venation similar. Body stouter, shorter; legs more laxly pilose; palpi also more laxly clothed, and third joint longer; antennæ thickly ciliated.

Type, C. Onelia.

CARANILLA ONELIA (Plate 170, Fig. 1, ♀, 1*b*, larva).

Naxia Onelia, Guénee, Noct. iii. p. 258 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1404.
Ophiusa umbrosa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 968 (1865).
Ophiusa obumbrata, Walker, *id.* p. 970.

Male and female: forewing violet greyish-brown; crossed by inwardly-oblique basal darker brown lilacine-grey speckled bordered wavy fasciæ, a sharply defined grey-bordered straight medial fascia, a paler zigzag discal line, and a purplish-brown bordered black undulated outer medial line, which end on the costa in a curved, outer-angled, lilacine-grey patch, followed by a sinuous submarginal and a marginal lilacine-grey speckled fascia, the cilia also being lilacine-grey: hindwing dusky brown, lilacine-grey towards the base, and with a lilacine-grey discal, submarginal, and marginal anal fascia, the latter including the cilia. Body violet greyish-brown; front of thorax, head, palpi, pectus, and fore femora above ochreous; tibiæ and tarsi greyish-brown.

Expanse $1\frac{4}{8}$ to $1\frac{6}{8}$ inch.

Adult larva cylindrical; with twelve perfect legs, the first and second pair of middle legs aborted; colour greyish-white above, olivaceous-grey beneath; with black spots on each segment disposed almost in linear series; a reddish lateral spot on fifth segment; front legs black. Pupa purplish-brown; efflorescent.

"Feeds on *Phyllanthus*." (*Thwaites.*)

Genus PINDARA.

Forewing broad, triangular; costa arched towards the end, apex acute, almost falcate, exterior margin oblique, uneven, slightly convex hindward; cell extending half the length; first subcostal emitted at nearly one-half before end of the cell,

second at one-fifth, trifid, third at one-fourth from base of second, and fourth at two-thirds from base of third, fifth from end of the cell and joined to third by a minute spur close to its base; discocellular concave, bent close to each end, radials from the angles; middle median from angle close to end of the cell, lower at one-half; submedian recurved: hindwing very broad, apex convex, exterior margin angular below the middle, uneven; cell extending one-third the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein slightly curved. Body very stout; palpi ascending, laxly squamose, second joint reaching to level of the vertex, third joint linear, pointed at the tip, one-third the length of second in male, one-half in female; antennæ setaceous; legs densely clothed, hind tarsi hairy in male.

Type, P. illibata.

PINDARA ILLIBATA.

Noctua illibata, Fabricius, Syst. Ent. p. 592 (1775); Mant. Ins. p. 212 (1787).

Hemeroblemma Peropaca, Hübner, Zuträge Samml. Exot. Schmett. iii. 33, 271, fig. 541-2 (1825) Walker, Catal. Lep. Het. B. M. xiv. p. 1242.

Ophisma lætabilis, Guénee, Noct. iii. p. 241 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1380.

Wings violaceous umber-brown, suffused with lilacine-grey, which is most prominent on the outer borders: forewing crossed by an outwardly-oblique short subbasal and an entire antemedial pale ochreous-bordered brown line, and two inwardly-oblique discal sinuous lines, followed by a less distinct submarginal zigzag pale ochreous line; a pale ochreous minute punctiform orbicular spot, and a yellowish-ochreous reniform mark; the outer discal sinuous line bordering a large dark brown curved apical spot: hindwing duller coloured; crossed by a lilacine-grey discal line. Cilia greyish-ochreous. Thorax, head, palpi, and legs violaceous ochreous-brown; abdomen above violaceous-brown; tarsi with pale ochreous bands.

Expanse $2\frac{1}{4}$ to $2\frac{3}{4}$ inches.

Genus PSIMADA.

Psimada, Walker, Catal. Lep. Het. B. M. xv. p. 1827 (1858).

Male and female: forewing elongated, rather narrow, costa almost straight, apex obtuse, exterior margin very slightly oblique, convex in the middle; cell long, extending to more than half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, third at one-fourth from base of second, and fourth at two-thirds from base of third, fifth from end of the cell and touching third near its base; discocellular very slender, slightly concave, radials from slight angles at each end; middle median from close to end of the cell, lower at one-fourth; submedian curved: hindwing short, quadrate, exterior margin angular in the middle,

abdominal margin short; cell extending half the length; two subcostals from end of cell; discocellular very slender, concave, radial from lower end; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein straight. Body moderately stout, palpi ascending, second joint squamose, extending above the vertex, third joint long, nearly half length of second in both sexes; antennæ in male stout, flattened in the middle, minutely ciliated, setaceous in female; femora fringed beneath, middle and hind tibiæ thick, laxly squamose, spurs long.

PSIMADA QUADRIPENNIS (Plate 170, Fig. 2).

Psimada quadripennis, Walker, Catal. Lep. Het. B. M. xv. p. 1828 (1858), ♀.

Male and female: forewing lilacine ochreous-brown, darkest exteriorly; crossed by a very indistinct brown subbasal, a curved antemedial, and a sinuous postmedial line, the two latter lines with an intervening slender waved fascia; before the apex is a dark chestnut-brown triangular costal spot, the outer side of which is bordered by a pale ochreous-white line, this line being continued beneath in a submarginal series of white pointed dots on the veins; a black punctiform orbicular spot, and a very indistinct brown reniform mark: hindwing dark chestnut-brown, paling to lilacine ochreous-brown at the base, and with a paler ochreous-brown marginal band extending from the anal angle to the middle angle. Body ochreous-brown; front of thorax, head, palpi, and legs above dark brown; tibiæ and tarsi with a whitish basal spot.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{2}{8}$ inch.

Genus ANEREUTHINA.

Anereuthina, Hübner, Zuträge Samml. Exot. Schmett. ii. 23, 163, f. 325-6 (1823).
Hypætra, Guénee, Noct. iii. p. 259 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1409.

Male and female: forewing elongate, costa almost straight, apex obtuse, exterior margin nearly erect, very slightly convex; cell extending to one-half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fourth, trifid, third at one-fifth from base of second, fourth at two-thirds from base of third, fifth from end of cell and joined by a short spur to base of third; discocellular bent in the middle and near the ends, radials from the angles; middle median from angle close to end of cell, lower at nearly one-half; submedian curved at the base: hindwing short; apex convex, exterior margin oblique, angular at end of lower median vein, truncated and waved from the angle; abdominal margin short; cell extending one-third the length; two subcostals from end of the cell, discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body very stout, short, frontal tuft projecting beyond the eyes; palpi obliquely ascending, second joint reaching vertex, compressed,

compactly pilose, third joint nearly half length of second, linear; legs short, thick, thickly pilose, spurs long; antennæ thick, finely setaceous.

Type, A. renosa.

Larva semi-looped; with fourteen legs; a conical dorsal prominence on the two last segments.

ANEREUTHINA INCLUDENS (PLATE 170, FIG. 6).

Avatha includens, Walker, Catal. Lep. Het. B. M. xiii. p. 1107 (1857).
Hypætra complacens, Walker, *id.* xiv. p. 1414 (1858), ♂.

Male: forewing ferruginous-brown; crossed by a slender zigzag subbasal line, a dark brown inner-bordered black angular antemedial line, a similar bordered inwardly-oblique discal black line, which curves inward from the costa to upper end of the cell and is prolonged narrowly outward beyond lower end of the cell, to which it returns and then descends to the posterior margin, the curved outer space in front of the cell being black; the inner area between the antemedial and discal lines speckled with whitish scales, and including the black orbicular spot; a few transverse indistinct brown strigæ, some whitish speckles partly along the veins, a zigzag cluster below the apex, and a dot at base of the wing: hindwing dusky brown, with two slightly paler fasciæ from anal angle; cilia at apex and anal angle whitish. Body ferruginous-brown; thorax with a black spot in front and one on each side; palpi blackish at the base; tarsi blackish, with pale bands.

Expanse 1$\frac{4}{8}$ inch.

ANEREUTHINA EXPECTANS.

Achæa expectans, Walker, Catal. Lep. Het. B. M. xv. p. 1827 (1858), ♀.

Female: forewing cinereous-brown, with short black speckles; subbasal and antemedial line obsolete; a black discal line, which is indented and prolonged at end of the cell; a submarginal zigzag line formed by prominent black speckles; middle of the wing and outer border clouded with dark brown; a white dot at base of the wing: hindwing dusky brown, with two paler fasciæ from anal angle; cilia at apex and anal angle whitish. Body cinereous-brown; thorax with three black spots in front; palpi blackish at the base; tarsi with pale bands.

Expanse 1$\frac{4}{8}$ inch.

ANEREUTHINA DIVISA.

Hypætra divisa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 963 (1865).

"Male. Ochraceous: forewings pale fawn colour; exterior line black, undulating, much bent outward in front, obsolete near the costa; exterior space ferruginous-brown, paler towards the exterior border, but darker than the interior part; submarginal line blackish, diffuse, undulating, very indistinct; a ferruginous-brown

black-bordered patch in the interior part, joining the interior border, and excavated on the outer side; two ochraceous marks on the costa; marginal points black; reniform mark indicated by a black point: hindwings cinereous, brown towards the exterior border; fringe testaceous.

"Expanse 13 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

ANEREUTHINA FRONTALIS (Plate 170, Fig. 3).

Ophiusa frontalis, Walker, Catal. Lep. Het. B. M. xiv. p. 1434 (1858).

Forewing pale ferruginous-brown, with numerous transverse black-speckled sinuous strigæ, which imperfectly form continuous transverse lines; a blackish triangular patch at end of the cell; a black punctiform orbicular spot; hindwing dusky brown, with two paler fasciæ from anal angle; cilia at apex and anal angle whitish. Body pale ferruginous-brown; thorax with a black spot in front and one on each side; legs ferruginous-brown, with pale bands; palpi blackish at the base.

Expanse $1\frac{4}{8}$ inch.

ANEREUTHINA CONDITA (Plate 170, Fig. 5).

Hypætra condita, Walker, Catal. Lep. Het. B. M. xiv. p. 1413 (1858), ♂.

Male: forewing ferruginous greyish-brown, with a short basal costal black streak, a broad antemedial transverse black band, which is straight on its outer edge and dilated on the inner edge; at end of the cell is a black irregular-shaped patch, which is excavated in the middle on its inner edge, and is connected by a slender line to the costal margin; on the outer border is a submarginal sinuous brown line; middle of the wing crossed by two pale brown sinuous lines; orbicular spot punctiform, black; base of wing and across the disc clouded with purplish-brown: hindwing pale brown, with darker outer border, traversed by two anal marginal sinuous whitish fasciæ; cilia at apex and anal angle alternated with white. Body ferruginous greyish-brown; legs with pale bands.

Expanse $1\frac{7}{8}$ inch.

ANEREUTHINA TRIGONIFERA (Plate 170, Fig. 7).

Hypætra trigonifera, Walker, Catal. Lep. Het. B. M. xiv. p. 1411 (1858), ♀.

Female: forewing greyish ferruginous-brown, transversely flecked with darker brown; crossed by a black subbasal sinuous line, a recurved antemedial line, a discal line curving from the costa to end of the cell and thence bent outward beyond its lower end; exterior border with a submarginal zigzag ferruginous-brown incomplete fascia; the inner area, the borders of the middle lines, and their inner area more or less ferruginous-brown; a triangular black patch on the angled area of the discal

line in front of the cell, and a black patch from the inner line below the cell; a slight blackish orbicular spot, and a white dot at base of the wing: hindwing dusky brown, with two slightly paler fasciæ from anal angle; cilia at apex and anal angle whitish. Body greyish ferruginous-brown; three black spots on front of thorax; palpi blackish at the base; legs with pale bands.

Expanse $1\frac{5}{8}$ inch.

ANEREUTHINA CURVIFERA (Plate 170, Fig. 4).

Hypætia curvifera, Walker, Catal. Lep. Het. B. M. xiv. p. 1412 (1858), ♀.

Male. Dark purplish ferruginous-brown, transversely flecked with indistinct blackish strigæ; crossed by an indistinct blackish subbasal sinuous line, a recurved antemedial line, and a discal line which is deeply angulated at end of the cell; the interspace and outer borders of the two latter lines clouded with darker brown; an indistinct black orbicular spot, and a white dot at base of the wing: hindwing dusky brown, with two paler fasciæ from anal angle; cilia at apex and anal angle whitish. Body dark blackish ferruginous-brown; thorax with a black spot in front and one on each side; palpi black at the base; legs with pale bands. Female: forewing uniformly darker brown; the discal line only indistinctly visible; the outer margin flecked with zigzag disposed pale strigæ: hindwing as in male.

Expanse, ♂ $1\frac{5}{8}$, ♀ $1\frac{7}{8}$ inch.

Genus ANSA.

Ansa, Walker, Catal. Lep. Het. B. M. xv. p. 1731 (1858).

"Male. Wings moderately broad: forewings straight along the costa, nearly rectangular at the tips, slightly denticulated and moderately oblique along the exterior border. Body stout; palpi long, porrect, second joint slightly pilose, hardly curved, third joint linear, somewhat shorter than second; antennæ hardly crenulated, with very fine setæ; thorax with elevated tegulæ; abdomen slightly crested at the base; legs stout, very densely tufted with long hairs."

ANSA FILIPALPIS.

Ansa filipalpis, Walker, Catal. Lep. Het. B. M. xv. p. 1731 (1858), ♂.

"Male. Black, varied with ferruginous; cinereous beneath: forewings ferruginous, speckled with black, and with numerous transverse undulating and denticulated black lines; submarginal points black, with pale marks: hindwings cinereous. Abdomen cinereous.

"Expanse 16 lines."

Genus DYSGONIA.

Dysgonia, Hübner, Verz. bek. Schmett. p. 269 (1818-25).

*Ophiusa** (part), Ochsenheimer, Schmett. Eur. iv. p. 93 (1816); Dahl; Treitschke; Boisd. Meigen; Duponchel.

Ophiusa, Guénee, Noct. iii. p. 263; Walker, Catal. Lep. Het. B. M. xiv. p. 1418.

Hemachra (part), Sodoffsky.

Grammodes (part), Lederer, Noct. p. 199 (1857); Staudinger, Catal. Eur. Lep. p. 137 (1871).

Forewing elongate, triangular, apex acute, exterior margin slightly oblique; cell extending half the length; first subcostal at about two-fifths before end of the cell, second at one-fifth, trifid, third at one-fifth from base of second, fourth at two-thirds from base of third, fifth from end of the cell and joined to third by a minute spur near its base; discocellular slightly concave, bent close to each end, radials from the angles; middle median from close to end of the cell, lower at beyond two-fifths; submedian slightly curved: hindwing short, broad, exterior margin convex; cell extending two-fifths the length; first subcostal from angle immediately before end of the cell; discocellular very slender, concave, radial from near lower end; middle median from angle immediately before end of the cell, lower at one-third; submedian and internal vein straight. Body stout; abdomen smooth; palpi vertical, moderately stout, laxly squamose, second joint reaching the vertex, third joint short, linear, nearly one-third length of second; antennæ slender, very minutely ciliated; legs moderately stout, slightly pilose beneath, tibiæ thickish, spurs stout.

Type, D. Algira.

DYSGONIA JOVIANA (PLATE 170, FIG. 9, 9*a*. larva).

Phalæna Noctua Joviana, Cramer, Pap. Exot. iv. p. 237, pl. 399, fig. B (1782).

Noctua Joviana, Fabricius, Ent. Syst. iii. 2, p. 42.

Noctua sinuata, Fabricius, Mant. Ins. ii. p. 145 (1787).

Dysgonia Jovis, Hübner, Verz. bek. Schmett. p. 269 (1818-25).

Ophiusa Myops, Guénee, Noct. iii. p. 265 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1428.

Male and female: forewing violet greyish-brown; crossed by a pale-bordered black subbasal short line, an inwardly-curved antemedial line, followed by a pale-bordered deep brown broad discal band, which is curved on its inner edge and triangulated on its outer edge, and from its upper angle extends a recurved subapical deep brown streak, the costal edge above it being marked by pale dots; below the streak is a submarginal series of more or less distinct black points, each point ending in a white-speckled streak along the veins, the black points being most distinct on

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* Ochsenheimer divided his genus *Ophiusa* into three sections: A, B, C. Hübner in 1818-25 (Verz. p. 267), and Stephens in 1830 (Illust. iii. p. 125), used it for section A only=(*Toxocampa*, of Guénee in 1852). This action of Hübner's and Stephens' consequently restricted the genus *Ophiusa* to the species of section A.

the median veins: hindwing dusky brown, with a slender pale brownish-grey transverse discal, a short subanal, and a marginal greyish-speckled fascia; cilia greyish-white below apex. Body, palpi, and legs violet greyish-brown; tarsi with pale bands.

Expanse $1\frac{5}{8}$ to $1\frac{6}{8}$ inch.

Larva elongated; with fourteen perfect and two rudimentary legs, the second pair though perfectly formed are much smaller than the others; two red dorsal tubercles on twelfth segment; colour bluish-grey above, yellowish beneath; sparsely spotted with black; a sublateral larger spot also on fifth segment; head greyish-white, spotted with black; forelegs black; middle legs reddish. Pupa purplish-black, covered with white efflorescence.

"Feeds on *Phyllanthus melanthesia.*" (*Thwaites.*)

DYSGONIA ARCUATA (Plate 171, Fig. 3).

Ophiusa arcuata, Moore, P. Z. S. 1877, p. 609.

Ophiusa Joviana, Guénee, Noct. iii. p. 269; Walker, Catal. Lep. Het. B. M. xiv. p. 1429 (*nec* Cramer).

Male and female: forewing violet greyish-brown; crossed by a pale-bordered black subbasal short line, an outwardly angularly-curved antemedial line, the inner area from which to the base of the wing is deep brown, followed by a pale-bordered deep brown discal band, the inner edge of which is curved, and the outer edge acutely angulated on the upper radial, and there connected to a dark brown sinuous apical streak; below the angle also is a slight brown submarginal sinuous fascia with white-speckled points on the veins: hindwing dusky brown, with an indistinct pale brownish-grey transverse discal fascia, a short subbasal and a marginal speckled fascia. Thorax, head, palpi, and legs above dark brown; tarsi with pale bands; abdomen dusky brown.

Expanse $1\frac{6}{8}$ to 2 inches.

DYSGONIA STUPOSA (Plate 171, Fig. 7).

Noctua stuposa, Fabricius, Ent. Syst. iii. 2, p. 42 (1793).

Ophiusa stuposa, Guénee, Noct. iii. p. 271; Walker, Catal. Lep. Het. B. M. xiv. p. 1429.

Phal. Noctua achatina, Cramer, Pap. Exot. iii. p. 145, pl. 273, fig. E (1782), *nec* Sulzer.

Ophiusa festinata, Walker, Catal. Lep. Het. B. M. xiv. p. 1432 (1858).

Male and female: forewing pale violet greyish-brown; base of wing to the outwardly-curved antemedial pale-bordered line dark brown; medial transverse band pale violet greyish-brown, with its outer edge gradually merging into the dark brown of the discal band; outer edge of the discal band triangulated, pale bordered, the upper angle being contiguous to the dark brown apical sinuous streak; along the submargin is an indistinct pale slender sinuous line with whitish points; a slight

brown lunular spot at end of the cell; base of wing with an indistinct pale short transverse costal line: hindwing dusky brown, with a slender white discal band, and an anal marginal grey-speckled band; cilia whitish at the apex. Body greyish-brown, tarsi with pale bands.

Expanse $1\frac{5}{8}$ to $1\frac{7}{8}$ inch.

DYSGONIA FULVOTÆNIA (Plate 171, Fig. 1).

Ophiusa fulvotænia, Guénee, Noct. iii. p. 272 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1431.

Forewing dark purplish violet-brown or olivescent-brown, with a broad medial transverse slightly outwardly-curved more or less pale purplish flesh-coloured band, which is slightly speckled with brown scales; a similar coloured outer marginal band with inwardly curved border, which is traversed hindward by a slight brown sinuous streak; the margins of the bands are sharply defined by a pale-bordered black line; the discal band being crossed by a pale-bordered curved subapical line, the colour above which is somewhat paler; a blackish speckled lunular spot on the pale band at end of the cell: hindwing brownish-black, with a broad ochreous-yellow transverse medial band, and a slight ochreous-brown marginal fascia, the latter being marked by a black subanal spot surmounted by an ochreous-white streak. Body, head, palpi, and legs violet-brown; tarsi with pale bands.

Expanse $2\frac{1}{2}$ to $2\frac{3}{4}$ inches.

DYSGONIA CRAMERI (Plate 171, Fig. 2).

Phalæna Noctua Achatina, Cramer, Pap. Exot. iii. p. 171, pl. 288, f. A (1782), *nec* Sulzer.
Ophiusa Achatina, Guénee, Noct. iii. p. 272 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1430.

Male and female: forewing very dark olivescent-brown, with a broad outwardly oblique slightly contracted medial purpurescent-white band, which is thickly speckled with brown scales; outer marginal border of the wing broad, pale purpurescent-brown, with its inner discal edge undulated, the veins with lilacine streaks; the discal brown band cut by a whitish oblique subapical line: hindwing dusky brown, with a broad transverse medial whitish band, an outer marginal cinereous-brown fascia, including the cilia, and a subanal black spot which is surmounted by a white streak. Body, palpi, and legs dark brown.

Expanse 2 to $2\frac{1}{4}$ inches.

DYSGONIA DISCALIS (Plate 171, Fig. 8).

Forewing with the basal area dark brown; a broad medial transverse lilacine-white band, which is slightly speckled with brown scales; discal band broad, defined by a pale-bordered brown line, of the same shape as in *D. Crameri*, its entire area being of a pale purplish-lilac colour; the apical patch above dark brown; outer

margin paler brown: hindwing dusky brown, with a whitish discal band, cinereous-brown marginal fascia and cilia, and a subanal white-streaked black spot. Body, palpi, and legs brown.

Expanse 2 to $2\frac{1}{8}$ inches.

DYSGONIA ALBIVITTA (Plate 171, Fig. 4).

Ophiusa albivitta, Guénee, Noct. iii. p. 271 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1430.

Male and female: forewing with the base and discal band dark bronzy olivescent-brown, the medial transverse band broad, pale brownish-white, and with distinctly defined curved borders, the discal brown band broad, with its outer border pale lined and angled outward below the apex, and also convexly angular between the upper and middle medians; outer margin of the wing violaceous greyish-brown with paler lined veins, and a marginal row of minute black dots; a pale-bordered black apical sinuous streak: hindwing dusky brown, with a well-defined white medial band, and a cinereous-brown marginal anal fascia; cilia also cinereous-brown. Body, palpi, and legs above dark brown.

Expanse $1\frac{6}{8}$ to 2 inches.

DYSGONIA SIMILLIMA (Plate 170, Fig. 8).

Ophiusa simillima, Guénee, Noct. iii. p. 266 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1428.

Male and female: forewing cinereous-brown, crossed by a pale-bordered black angular basal line, a slightly undulated outwardly-oblique antemedial line, and an inwardly-oblique discal line angulated outwardly below the costa and deeply undulated hindward; at the apex is a black spot, followed by a pale-bordered black subapical dentate mark, below which is a submarginal brown sinuous fascia with whitish points on the veins; and between the lower median and submedian is a marginal black point; the antemedial and discal line both with broad blackish-brown inner borders, the latter being traversed by a parallel black line: hindwing brown, with two pale testaceous short fasciæ from the anal angle; cilia at apex and anal angle pale testaceous. Body brown; legs with pale tarsal bands.

Expanse $1\frac{4}{8}$ inch.

DYSGONIA LUTEIPALPIS.

Ophiusa luteipalpis, Walker, Catal. Lep. Het. B. M. xxxiii. p. 968 (1865).

"Female. Cinereous-brown: forewings with the four lines brownish, denticulated; middle line diffuse; submarginal line indistinct; an irregular brown spot by the costa between the exterior and submarginal lines: hindwings a little darker than the forewings; lines indistinct above, more distinct beneath; abdomen and

underside more cinereous. Palpi vertical, rather long, pale luteous; third joint linear, conical at the tip.

"Expanse 20 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

Genus GRAMMODES.

Grammodes, Guénee, Noct. iii. p. 275 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1440.
Parallelia (part), Hübner, Verz. bek. Schmett. p. 269.
Grammodes (part), Lederer, Noct. p. 199.
Leucanitis (part), Lederer, *id.* p. 198.

Forewing somewhat elongated, triangular; cilia broad; cell extending more than half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, fifth from end of the cell and slightly touching third near its base; discocellular inwardly-oblique, concave, bent near lower end, radials from upper end and lower angle; middle median from angle close to end of cell, lower at two-fifths; submedian slightly curved: hindwing broad, exterior margin convex; cell more than one-third the length; two subcostals from end of the cell; discocellular very slender, bent in the middle, radial from near lower end; two upper medians from end of the cell, lower at one-fourth; submedian and internal vein straight. Body moderately stout; palpi rather thick, apex reaching the vertex, laxly squamose, third joint short; antennæ simple; legs stout, long, femora pilose beneath, spurs long.

Type, G. geometrica.

GRAMMODES AMMONIA.

Phalæna Noctua Ammonia, Cramer, Pap. Exot. iii. p. 98, pl. 250, fig. D (1782).
Grammodes Ammonia, Guénee, Noct. iii. p. 278; Walker, Catal. Lep. Het. B. M. xiv. p. 1443.

Forewing purpurescent greyish-brown; crossed by an inwardly-oblique antemedial and a postmedial black-brown band, both of which end in a slender line from the subcostal; the intervening space between the two bands below the subcostal vein being ochreous-white, the outer border of the postmedial band also margined by an ochreous-white line, followed by a submarginal angulated black fascia: hindwing greyish-brown, with a medial transverse brownish-white band, the outer margin broadly grey-speckled; cilia at the apex and anal angle also brownish-white. Body, palpi, and legs above greyish-brown.

Expanse $1\frac{1}{2}$ to $1\frac{3}{4}$ inch.

Genus CHALCIOPE.

Chalciope, Hübner, Verz. bek. Schmett. p. 268 (1818-25).
Grammodes (part), Guénee; Walker.

Forewing short, triangular; cilia broad; cell extending half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth

from end of cell and slightly touching third near its base; discocellular inwardly oblique, convex, radials from upper end and near lower end; middle median from angle close to end of the cell, lower at nearly one-half; submedian recurved: hindwing short, broad, exterior margin convex; cilia broad; cell extending one-third the length; two subcostals from end of cell; discocellular outwardly oblique, concave, radial from near lower end; two upper medians from end of cell, lower at one-fifth; submedian and internal vein straight. Body moderately stout, thorax laxly clothed; palpi ascending, thick, second joint reaching vertex, squamose, third joint short, thick, conical; antennæ simple; fore and hind legs and middle femora thickly pilose, middle tibiæ thick, compactly pilose, spurs long.

Type, C. Mygdon.

CHALCIOPE MYGDON.

Phalæna Noctua Mygdon, Cramer, Pap. Exot. ii. p. 94, pl. 156, fig. G (1779).
Chalciope Mygdon, Hübner, Verz. bek. Schmett. p. 268.
Grammodes Mygdon, Guénee, Noct. iii. p. 278; Walker, Catal. Lep. Het. B. M. xiv. p. 1441.

Forewing pale purpurescent greyish-brown; with a very dark brown oblique basal band, and a triangular discal band, the two bands being divided by an outwardly-oblique narrow brownish-white band, the discal band also having a slender brownish-white border on its upper and outer margin; a dark brown oblique streak from the apex, below which is a marginal row of black-tipt pale points: hindwing pale brown. Thorax, head, palpi, and legs above dark brown; abdomen pale brown.

Expanse $1\frac{2}{8}$ to $1\frac{3}{8}$ inch.

Genus FODINA.

Fodina, Guénee, Noct. iii. p. 274 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1437.

Wings broad, velvety; cilia long: forewing triangular, acute at the apex, exterior margin oblique, even, slightly convex; cell extending nearly half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-eighth from base of second, and fourth at two-thirds from base of third, fifth from end of cell and joined to third for a short distance near its base; discocellular concave, bent at each end, radials from the angles; middle median from angle close to end of cell, lower at two-fifths; submedian curved: hindwing short, broad, exterior margin uneven, convexly angular at end of lower median; cell short, broad; two subcostals from end of the cell; discocellular very slender, concave, bent near lower end, radial from angle; two upper medians from end of cell, lower at one-third; submedian and internal vein straight. Body somewhat slender, thorax short, tegulæ also short; abdomen smooth, slightly crested at base; palpi compressed, obliquely ascending, rather long, second joint extending half beyond the eyes, laxly squamose,

third joint lanceolate, acute at the tip, two-thirds length of second; antennæ minutely ciliated; legs rather long, femora slightly fringed beneath, spurs long, slender.

Type, F. Oriolus.

FODINA STOLA.

Fodina Stola, Guénee, Noct. iii. p. 275 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1439.

Forewing with a broad blackish-brown basal patch, which extends upward from the base of the posterior margin to upper end of the cell and thence descends obliquely and angularly outward to lower part of the disc, where it is acutely bent inward to the posterior margin before the angle; a similar coloured triangular patch occupying the apical area from the costa to exterior margin above the posterior angle, the extreme outer edge of the wing being bordered by a slender ochreous-white line; the intervening oblique band across the middle of the wing also ochreous-white and slightly peckled with ochreous-brown scales; the costal border from the base to apical patch purpurescent violet-brown and speckled with lilacine scales; cilia pale greyish-ochreous: hindwing ochreous-yellow, with a broad blackish apical band, and a few blackish speckles above anal angle. Thorax, head, palpi, and legs above purpurescent violet-brown; a slender collar in front of thorax and edge of tegulæ ochreous-white; abdomen ochreous-yellow, the basal tuft brown.

Expanse $1\frac{3}{8}$ to $1\frac{6}{8}$ inch.

FODINA PALLULA.

Fodina pallula, Guénee, Noct. iii. p. 275 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1439.

Forewing dark brown, of a purplish-ochreous tinge in some lights; crossed by an outwardly oblique medial ochreous-white narrow band, and a very slender marginal band; the cilia also being ochreous-white: hindwing cupreous-brown, with an ochreous-yellow transverse band extending from middle of the costa to anal angle, the band being broadest in the female, with the anal end of its outer border tipt with black. Thorax, head, palpi, and forelegs above dark-brown; abdomen paler at the sides.

Expanse $1\frac{2}{8}$ to $1\frac{3}{8}$ inch.

FODINA MUNDICOLOR.

Grammodes mundicolor, Walker, Catal. Lep. Het. B. M. xxxiii. p. 973 (1865), ♀.
? *Grammodes notata*, Fabricius, Ent. Syst. iii. 2, p. 39 (1794).

"Female. Luteous-testaceous, brighter beneath. Wings with black marginal points: forewings with two black costal triangular spots, the first middle, longer and more irregular than the second, which is apical. Wings beneath with a diffuse blackish apical tinge. Third joint of the palpi a little less than half length of second;

thorax with a broad black band in front and with a black mark on each shoulder; tarsi black above, posterior tarsi brown.

"Expanse 14 lines."

Described by Mr. Walker from specimens in the Collection of Mr. E. L. Layard.

Genus CALESIA.

Calesia, Guénee, Noct. iii. p. 257 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1408.

Male: forewing elongated, broad; costa arched towards the end; cilia broad, double scaled; a glandular patch of erectile hairs on the upperside, extending from the middle of the costal edge over end of the cell; the cell extending to half length of the wing; first subcostal emitted at one-fourth before end of the cell, second from close to end of the cell, trifid, fifth from end of the cell, free and widely separated from the third; discocellular inwardly-oblique, bent near each end, radials from the angles; middle median from close to end of the cell, lower at one-third before the end; submedian much recurved: hindwing very broad; exterior margin convex; cell extending one-fourth the length; two subcostals from end of the cell; discocellular concave, radial from near the lower end; two upper medians from end of the cell, lower at one-half; submedian and internal vein straight. Body moderately slender, abdomen pointed at the apex; palpi ascending, compressed, laxly squamose, second joint reaching the vertex, third joint long, three-fourths the length of second, slender; antennæ ciliated and with longer projecting lashes; legs rather long and slender, spurs also long and slender.

Type, C. dasyptera.

CALESIA DASYPTERA.

Erebus dasypterus, Kollar, Hügel's Kaschmir, iv. 2, p. 476 (1844), ♂.

Calesia comosa, Guénee, Noct. iii. p. 258, pl. 21, fig. 7 (1852), ♂; Walker, Catal. Lep. Het. B. M. xiv. p. 1408.

Male. Both wings ochraceous cinereous-brown: forewing with a glandular patch of long hairs on the upperside, which extend from middle of the costa over the end of the cell, the discal area below the tuft being brighter ochreous-brown. Front of head, palpi, pectus, fore and middle tibiæ, and abdomen above scarlet; thorax and base of abdomen above, and abdomen beneath, fore and middle femora, and tarsi, and hindlegs ochraceous cinereous-brown.

Expanse $1\frac{6}{8}$ inch.

CALESIA LEUCOSTIGMA (Plate 171, Fig. 5, ♀).

Erebus leucostigma, Kollar, Hügel's Kaschmir, iv. 2, p. 476 (1844), ♀.

Calesia stigmoleuca, Guénee, Noct. iii. p. 258 (1852), ♀; Walker, Catal. Lep. Het. B. M. xiv. p. 1409.

Female. Both wings ochraceous cinereous-brown, with very faint traces of a

darker transverse discal fascia: forewing with a prominent oval white spot at end of the cell. Thorax, base of abdomen above, abdomen beneath, femora, hind tibiæ, and tarsi brown; front of thorax, palpi, head, pectus, fore and middle tibiæ, and abdomen above scarlet.

Expanse $1\frac{1}{3}$ to $1\frac{5}{8}$ inch.

This is probably the female of the preceding species.

Genus PASIPEDA.

Pasipeda, Walker, Catal. Lep. Het. B. M. xv. p. 1795 (1858).

Male and female: forewing somewhat more triangular in form than in *Calesia*; cell extending half the length; first subcostal emitted at one-third before end of the cell, second at one-seventh, trifid, fifth from end of the cell, ascending and touching third near its base; discocellular concave, bent near each end, radials from the angles; middle median from close to end of the cell, lower at nearly one-half; submedian curved: hindwing short, exterior margin less convex than in Calesia; cell extending one-third the length; two subcostals from end of cell; discocellular slightly concave, radial from near lower end; two upper medians from end of the cell; lower at nearly one-half. Body moderately slender; palpi ascending, slightly shorter than in Calesia; antennæ minutely ciliated in male.

PASIPEDA HÆMORRHOA.

Calesia hæmorrhoa, Guénee, Noct. iii. p. 258 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1409.
Calesia Patnia, Felder et Rogenh. Novara Voy. Lep. iv. pl. 117, fig. 17 (1874).

Male and female. Dark cinereous-brown; with very faint traces of darker wavy transverse discal and submarginal fasciæ; forewing, in some specimens, with an indistinct paler cinereous reniform spot, and slightly speckled outer borders to the wavy fasciæ. Thorax, front of head, base of abdomen above, femora above, and tarsi cinereous-brown; abdomen above and beneath, palpi, pectus, and tibiæ scarlet, the abdomen beneath in some being tinged with brown.

Expanse $1\frac{5}{8}$ inch.

Larva half-looped; with twelve legs; colour dark cinereous violaceous-brown, marbled with slender irregular black lines; the sixth to eighth segment also with a transverse black stripe; head, middle and hind legs red; front legs black.

PASIPEDA RUFIPALPIS.

Pasipeda rufipalpis, Walker, Catal. Lep. Het. B. M. xv. p. 1795 (1858), ♀.

"Female. Dark brown, cinereous-brown beneath. Wings with two or three darker undulating very indistinct lines: forewings with a minute whitish dot at end

of the cell; submarginal line indicated by some cinereous speckles. Palpi orange-red; abdomen red above.

"Expanse 17 lines."

This is probably a variety of the preceding.

PASIPEDA SATELLITIA (Plate 171, Fig. 6, ♂, 6*a*, larva).

Male and female. Both wings smooth, glossy, dark cinereous-brown: forewing with a prominent white oval spot at end of the cell, and a transverse submarginal waved row of seven smaller white spots. Thorax and base of abdomen cinereous-brown; front of thorax, head, first and second joints of palpi, pectus, tibiæ, and tarsi ochreous-yellow; abdomen above scarlet; femora and abdomen beneath cinereous-brown; third joint of palpi and tip of the second, and bands on fore tibiæ, and on tarsi black.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{4}{8}$ inch.

Larva half-looped; with twelve legs; colour dark purplish violet-brown; a few short blackish hairs on the anterior and posterior segments; some yellow transverse stripes bordering each segment, which are terminated by two divergent dorsal spots; on each segment also are some lateral spots and streaks of the same colour; head and legs also yellow spotted. Pupa purplish-brown, abdominal segments reddish.

"Feeds on *Thunbergia alata*." (*Thwaites.*)

Family TINOLIIDÆ.

Imago of moderate size: forewing rather broad and elongated, not acute at the apex; antennæ bipectinated in male.

Larva semi-looped; with twelve legs; a few short dorsal hairs, and long spatular filaments on middle segments. Pupa among living leaves.

Genus TINOLIUS.

Tinolius, Walker, Catal. Lep. Het. B. M. iii. p. 621 (1855).

Forewing elongated, slightly arched towards the end, exterior margin oblique and slightly convex; cell long, extending nearly two-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at three-fifths from base of second, and fourth at one-half from base of third, fifth from end of cell, ascending and touching second at one-third between its base and third; discocellular concave in the middle, bent at each end, radials from the angles; middle median from angle close to end of the cell, lower at about two-fifths; submedian slightly curved: hindwing longer than broad; costa almost straight, exterior margin oblique, convex posteriorly, abdominal margin short; cell extending about one-third

the length; two subcostals from end of the cell; discocellular outwardly-oblique, concave, radial from near lower end; two upper medians from extreme end of cell, lower at one-third; submedian and internal vein straight. Body moderately slender, laxly clothed; abdomen with slight dorsal and lateral tufts; palpi ascending, rather stout, laxly clothed, third joint minute, conical; legs rather long, femora pilose beneath, tibiæ slightly pilose, spines stout; antennæ in male bipectinated, in female minutely setose.

TINOLIUS EBURNEIGUTTA (Plate 171, Fig. 10, ♂, 10*a*, larva).

Tinolius eburneigutta, Walker, Catal. Lep. Het. B. M. iii. p. 621 (1855).

Light red: forewing below the costal border with a slight olivescent tinge; with an ochreous-white spot at base of the wing, a larger round spot in middle of the cell, two similar spots at outer end of the cell, and two less prominent spots on middle of the posterior margin, the three cell-spots being bordered by a brown line: hindwing brighter coloured at the base. Thorax tinged with olivaceous, with two black spots in front; abdomen with interrupted black segmental bands; legs with black bands, tarsi with black tips.

Expanse $1\frac{3}{4}$ to $2\frac{3}{4}$ inches.

Larva half-looped; with twelve legs; a few short black hairs on each segment, and four long dorsally radiating black spatular filaments on the fourth, fifth, and sixth segments; colour violet-black; the segments transversely bordered by irregularly broken yellow stripes; head also with yellow stripes and spots. Pupa dark red, marbled with yellow.

"Feeds on *Thunbergia alata*." (*Thwaites.*)

Family EUCLIDIIDÆ.

Imago of moderate size. Wings rather broad, with broad double ciliæ: forewing triangular. Body more or less slender; palpi short, apex generally short; antennæ slender, crenulate or pectinated in male. (*Guénee.*)

Larva elongated, cylindrical; with twelve legs.

Genus TRIGONODES.

Trigonodes, Guénee, Noct. iii. p. 281 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1447.
Chalciope (part), Hübner, Verz. bek. Schmett. p. 268.

Forewing triangular, costa slightly arched towards the end, apex acute, exterior margin oblique, slightly recurved; cell narrow, extending to half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, third at one-fourth from base of second, and fourth at two-thirds from base of third, fifth from end of cell and slightly touching second below base of third; discocellular

inwardly-oblique, concave in middle, bent at each end, radial from the angles; middle median from close to end of the cell, lower at two-fifths; submedian slightly curved from the base: hindwing short, broad, triangular, exterior margin convex posteriorly; cell short, less than one-third the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body slender; palpi vertical, second joint clothed with thick short hair, third joint pointed, about half length of second; antennæ minutely ciliated; legs slender; femora and tibiæ clothed with short thick hair beneath; tarsi long; spurs slender.

Type, T. Hyppasia.

TRIGONODES HYPPASIA.

Phalæna Noctua Hyppasia, Cramer, Pap. Exot. iii. p. 99, pl. 250, fig. E (1782).

Trigonodes Hyppasia, Guénee, Noct. iii. p. 283 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1450.

Noctua Hypatia, Fabricius, Ent. Syst. iii. 2, p. 98 (1794).

Chalciope Hypasia, Hübner, Verz. bek. Schmett. p. 268.

Phal. Noctua Deliana, Stoll, Cram. Pap. Exot. v. p. 160, pl. 36, fig. 4 (1791).

Forewing pale violaceous greyish-brown; with a dark brown triangular patch below the cell, and a smaller patch in the disc, each with an ochreous-white bordering line on the lower side, the intervening oblique space between the patches also mostly ochreous-white; a submarginal dark brown undulated fascia bordered outwardly by a pale line: hindwing dusky greyish-brown; with a darker narrow discal and a broad submarginal fascia. Body, palpi, and legs pale greyish-brown.

Expanse $1\frac{3}{8}$ to $1\frac{4}{8}$ inch.

Genus ACANTHOLIPES.

Acantholipes, Lederer, Noct. Eur. p. 198 (1857).

Microphysa (part), Boisduval.

Wings small: forewing elongated, narrow; cell extending half the length; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, third from close to base of second, fourth at two-thirds from base of third, fifth from end of the cell, and touching third close to its base; discocellular oblique, radials from close to each end; middle median from near end of the cell, lower at one-third; submedian straight: hindwing rather long, exterior margin and anal angle very convex; cell one-third the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from beyond end of the cell, lower at one-third before the end; submedian and internal vein straight. Body small; palpi porrect, broad, second joint projecting much beyond the front, laxly squamose, third joint minute; antennæ setose; legs long, squamose, middle and hind tibiæ spurred.

Type, A. regularis, Hübner.

ACANTHOLIPES TRIFASCIATA (Plate 172, Fig. 2).

Dark cinereous-brown: forewing with two transverse inwardly-oblique black streaks below the cell, a short black streak at end of the cell, and a broad cuprescent-brown discal band, the outer border of the band being angulated in the middle and at the ends, and the inner border slightly recurved, even, and with a pale ochreous line: hindwing with a short narrow medial, a discal, and a broad marginal cuprescent-brown band. Body, palpi, and legs cinereous-brown.

Expanse $1\frac{1}{10}$ inch.

Genus? EUCLIDIA, *OCHS.*

EUCLIDIA? TARSALIS.

Euclidia? tarsalis, Walker, Catal. Lep. Het. B. M. xxxiii. p. 986 (1865).

"Male. Dark ferruginous-red, dark cinereous beneath. Wings black speckled; with an almost straight oblique postmedial blackish line, which is bordered with cinereous on the outer side; fringe doubly interlined with brown: forewings with a blackish nearly straight line near the base, bordered with cinereous on the inner side; a black dot in the disc between the lines. Palpi pale cinereous on the inner side; abdomen with a fawn-coloured apical tuft; tarsi pale cinereous.

"Expanse 14 lines."

Family POAPHILIDÆ.

Imago small, or moderate; wings stout, with dense ciliæ. Palpi ascending, apex mostly very short; antennæ filiform, crenulate, pubescent, or with remote and minute setæ in male. (*Guénee.*)

Larva cylindrical, smooth, semi-looped, with sixteen legs, but the first middle pair imperfect.

Genus DIERNA.

Dierna, Walker, Catal. Lep. Het. B. M. xvi. p. 204 (1858).
Nahara, Walker, *id.* xxxiii. p. 1004 (1865).

Wings short: forewing broad, subfalcate, exterior margin slightly convex; cell extending more than half the length; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, third from very close to base of second, and fourth from very near end of third, fifth from end of cell and slightly touching third near its base; discocellular concave, bent near each end, radials from the angles; middle median from angle very close to end of cell, lower at one-third; submedian recurved: hindwing broad, somewhat quadrate, apex convex, exterior margin abruptly truncated from end of lower median, abdominal margin very short; cell two-fifths the length; two subcostals from end of the cell; discocellular very slender,

concave, radial from close to lower end; two upper medians from end of cell, lower at two-fifths; submedian and internal vein straight. Body moderately stout; frontal tuft prominent; palpi ascending, second joint reaching vertex, compressed, laxly squamose, third joint linear, acute at the tip, about two-thirds length of second; antennæ in male rather thick to nearly three-fourths its length, where the shaft is slightly dilated and dislocated, the end slender, with both short and long setæ to the distorted joint, and shorter setæ thence to the tip; antennæ in female normal and finely setose; legs rather long and slender, femora and fore tibiæ slightly pilose, spurs slender.

DIERNA ACANTHUSALIS (Plate 171, Fig. 9).

Dierna Acanthusalis, Walker, Catal. Lep. Het. B. M. xvi. p. 205 (1858), ♂.
Nahara clavifera, Walker, *id.* xxxiii. p. 1104 (1865), ♂.

Male. Pale lilacine brownish-ochreous: forewing with numerous short transverse brown-speckled strigæ; a prominent pale inner-bordered brown line extending from the apex to posterior margin, the line being angulated inward between the median and submedian veins and there broadly dilated with black, the outer border of the line being clouded with brown; above the posterior angle are two black-speckled spots, and along the margin is a row of black points; two or three blackish-speckled spots, and transverse inwardly-oblique brownish fasciæ near base of the wing: hindwing with the apex broadly dusky brown, the anal area with numerous short transverse brown strigæ. Thorax with a ferruginous-brown collar and black-speckled front; head, second joint of palpi, and forelegs above ferruginous-brown. Female. Somewhat paler brownish-ochreous; the strigæ less distinct: forewing with the transverse line from the apex less prominent, and not dilated with black at its lower end.

Expanse $1\frac{2}{8}$ to $1\frac{3}{8}$ inch.

Genus ARASADA.

Forewings rather narrow, elongated; costa almost straight, apex acute, exterior margin oblique, very slightly convex; cell extending to half the length; first subcostal emitted at nearly half before end of the cell, second close to the end, trifid, third at one-half from base of second, and fourth at one-half from base of third, fifth from end of the cell and slightly touching second at half-way between its base and third; discocellular concave in middle, bent close to each end, radials from the angles; middle median at one-seventh before end of the cell, lower at three-sevenths; submedian slightly recurved: hindwing rather long and triangular, exterior margin very oblique; discocellular very slender, inwardly oblique, radial from near lower end; two subcostals from end of the cell; two upper medians on a footstalk beyond end of the cell; lower at one-fourth before the end; submedian and internal

vein slightly curved. Body slender; palpi ascending, rather slender, laxly squamose, not reaching to level of the eyes, third joint minute; antennæ setaceous, with fine short slender lashes; legs long, femora and tibiæ pilose, middle and hind tarsi also pilose at the base above; tarsi very long, middle and hind tibial spurs extremely long.

ARASADA PYRALIFORMIS (Plate 172, Fig. 1, ♂, 1*a*, larva).

Male and female. Pale brownish-ochreous, with a lilacine tinge in some lights; sparsely speckled with minute black scales: forewing with an indistinct ochreous-yellow waved transverse antemedial lunular line, and a similar inwardly-oblique postmedial line, both lines being devoid of black scales; two black-speckled spots at end of the cell, the upper one being small; a marginal row of prominent black dentate spots, three or four parallel but less distinct spots below the apex, and also three or four on the costa before the apex: hindwing with a transverse medial ochreous-bordered white wavy band, two small black-speckled spots at end of the cell, and a marginal row of black dentate spots. Body pale brownish-ochreous, abdomen with brown dorsal bands; palpi and front legs brown.

Expanse $1\frac{3}{10}$ to $1\frac{4}{10}$ inch.

Larva with twelve legs; head large and projecting vertically above the anterior segments; colour green, with a dorsal yellowish band, lateral streaks, and spiracles; head and sides of anterior segments black speckled; second segment also with lateral purplish-brown streaks; a blackish line dividing the fifth and sixth segments; some blackish lateral marks also on posterior segments; legs streaked with purplish-brown. Pupa within rolled portion of leaf; green, with reddish segmental bands.

Family REMIGIIDÆ.

Wings broad, velvety; hindwings sometimes pubescent beneath. Body generally stout; palpi ascending; antennæ long, slender, often filiform; legs of male very pilose; hind pair lanuginous; hind tarsi often with dense compressed tuft.

Larva semi-looped; with twelve legs; cylindrical. Pupa without cocoon in the earth; efflorescent.

Genus REMIGIA.

Remigia (group 1) Guénee, Noct. iii. p. 312 (1852).
Remigia (part), Walker, Catal. Lep. Het. B. M. xiv. p. 1493.

Male: forewing triangular, rather broad, costa slightly arched towards the end, exterior margin slightly oblique and convex; cell extending more than half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, third at about one-third from base of second, and fourth at one-third from base of third, fifth from end of cell and slightly touching third at its base;

discocellular inwardly oblique, convex in middle, bent near each end, radials from the angles; middle median from angle close to end, lower at two-fifths before the end; sub-median curved: hindwing broad, triangular, exterior margin oblique, anal angle very convex; thickly clothed beneath with raised scales; cell extending about one-third the length; two subcostals from end of cell; discocellular outwardly oblique, concave, radial from near lower end; two upper medians from end of the cell, lower at one-third; submedian and internal vein straight. Body moderately stout; palpi erect, second joint reaching level of the eyes, laxly squamose, third joint one-third length of second; antennæ minutely ciliated, with a few fine longer lashes; femora and tibiæ very densely clothed with compactly disposed short hairs; hind tarsi also very densely clothed with hairs above; spurs slender.

Type, R. frugalis.

REMIGIA FRUGALIS (PLATE 172, FIG. 4, ♀, 4*a*, larva).

Noctua frugalis, Fabricius, Ent. Syst. iii. 2, p. 138 (1794).
Remigia frugalis, Guénee, Noct. iii. p. 314 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1507.
Chalciope Lycopodia, Geyer, Hübner's Zutr. Exot. Schmett. 25, 449, fig. 897-8 (1837).
Remigia translata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1015 (1865), ♀.

Wings pale cinereous ochreous-brown; forewing with a very indistinct brown erect transverse waved antemedial line, an orbicular dot and an oval reniform mark, followed from the apex by an inwardly-oblique dark brown straight line, the inner border of which is pale and the outer border shaded by ferruginous-brown, beyond which is a submarginal row of black vein-points and a less distinct denticulated marginal line; a short brown fascia below the cell, and a blackish-speckled spot below middle of the submedian vein is also present in some specimens: hindwing with a transverse dusky-brown discal and a submarginal fascia.

Expanse $1\frac{4}{8}$ to $1\frac{6}{8}$ inch.

Larva semi-looped; with twelve legs: pale yellowish-ochreous, with slender longitudinal darker ochreous lines, an intervening sublateral row of dark olivaceous spots, and two subdorsal lines; fifth and sixth segment posteriorly edged with a dorsal black streak. Pupa ochreous-red.

"Feeds on *Zinziberaceæ*." (*Thwaites.*)

Genus CAUNINDA.

Remigia (group 2), Guénee, Noct. iii. p. 412.
Remigi (part), Walker, Catal. Lep. Het. B. M. xiv. p. 1493.
Mocis (part), Hübner, Verz. bek. Schmett. p. 267.
Drasteria (part), Hübner, *id.* p. 280.

Forewing less triangular in form than typical Remigia: hindwing also less triangular. Venation similar. Palpi comparatively more slender, the second joint

broader at the tip, third joint somewhat shorter and more slender; legs more thickly and laxly clothed, hind tarsi naked; antennæ more thickly ciliated.

Type, C. Archesia.

CAUNINDA ARCHESIA (Plate 172, Fig. 3, ♂, 3*a*, larva).

Phalæna Noctua Archesia, Cramer, Pap. Exot. iii. p. 145, pl. 273, fig. F. G. (1782), ♀.

Drasteria Archesia, Hübner, Verz. bek. Schmett. p. 280.

Remigia Archesia, Guénee, Noct. iii. p. 318; Walker, Catal. Lep. Het. B. M. xiv. p. 1504.

Phal. Noctua Virbia, Cramer, Pap. Exot. iii. p. 146, pl. 273, fig. H. (1782), ♂.

Remigia bifasciata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1014 (1865), ♂.

Pale purpurescent ferruginous-brown: forewing crossed by a short pale-bordered darker brown subbasal costal line, a prominent dark ferruginous-brown outwardly oblique antemedial band, followed by two slender brown undulated medial lines, which pass between a brown orbicular and reniform mark, beyond which is a similar slender irregular discal line, the latter being encompassed by an angulated dark ferruginous-brown fascia; crossing the submargin is a black-pointed denticulated line, and the extreme outer margin is clouded with dark ferruginous-brown; some specimens have a more or less greyish-black spot at the lower outer end of the antemedial band, and in some there is also a blackish spot before this band below the submedian vein: hindwing with a narrow waved discal and a broad submarginal ferruginous-black fascia, the latter having a sinuous outer border and traversed by a short pale sinuous anal streak; marginal line also blackish. Body pale ferruginous-brown; thorax, head, palpi, and forelegs darker brown.

Expanse 2 inches.

Larva semi-looped; with twelve legs; the dorsal and undersurface purplish-brown, minutely black dotted, the sides yellowish and longitudinally lined with red and a sublateral row of minute black dots: head with a brown and red lateral streak; front legs red, middle and hind legs brown. Pupa reddish; efflorescent.

"Feeds on *Desmodium*." (*Thwaites.*)

Family FOCILLIDÆ.

Fore and hindwings angular; alike in colour and with similar markings, which are conspicuous beneath. Body moderately stout, thorax somewhat pilose, abdomen with dorsal tufts; palpi very erect, third joint very large and long, slender; antennæ slender, pubescent in the male; legs long, hardly pilose.

Genus ZETHES.

Zethes, Rambur, Ann. Soc. Ent. France, ii. p. 29 (1833), Guénee, Noct. iii. p. 329; Walker, Catal. Lep. Het. B. M. xv. p. 1522.

Wings broad: forewing triangular, costa arched at the end, apex acute, exterior margin oblique, angular in the middle; cell extending to half the length; first sub-

costal emitted at one-half before end of the cell, second at one-fifth; trifid, third from near base of second, fourth at three-fifths from base of third, fifth from end of the cell and slightly touching third near its base; discocellular slender, concave, bent at each end, radials from the angles; middle median from angle close to end of cell, lower at two-fifths before the end; submedian slightly curved from the base: hindwing short, quadrangular, apex convex, exterior margin angular in the middle; cell extending two-fifths the length; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal vein straight. Body moderately stout, palpi long, ascending, second joint reaching above the vertex, rather broad, compressed, squamose, third joint nearly half length of second, acute at the tip; antennæ very minutely ciliated; legs rather long, slender, very slightly pilose, spurs long, slender.

Type, Z. insularis.

ZETHES DECOLOR (Plate 172, Fig. 8).

Focilla decolor, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1029 (1865).

Pale purplish brownish-ochreous, sparsely speckled with minute black scales: forewing crossed by a very indistinct pale brown-bordered subbasal undulated line, an angulated discal duplex line, and a marginal row of black points; a punctiform black orbicular spot and a large indistinctly-defined reniform mark: hindwing with a minute black dot at end of the cell, a brown discal transverse duplex line, and a marginal row of black points. Tip of palpi, and tarsi with black bands.

Expanse $1\frac{3}{8}$ inch.

ZETHES LINEIFERA (Plate 172, Fig. 5).

Ephyrodes lineifera, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1070 (1865), ♂.
Zethes Sondaicus, Snellen, Tijd. voor Ent. Neder. Ind. 1877, p. 38, pl. 2. f. 17, ♂.

Pale greyish-ochreous, sparsely speckled with minute black scales: forewing with two black transverse subbasal inwardly-oblique sinuous lines, a discal angulated duplex line, followed by a submarginal sinuous line, an intermarginal row of dots, and a marginal line, in the male a longitudinal black-speckled fascia extends from the base to middle of the exterior margin; orbicular spot punctiform black; reniform mark blackish; cilia black-speckled towards the apex: hindwing with a black speckled streak at end of the cell, a transverse discal duplex line, an ill-defined submarginal sinuous line, and a large spot at anal angle; intermarginal row of dots, and a marginal line. Palpi with blackish bands.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{3}{8}$ inch.

ZETHES USURPATALIS (Plate 172, Fig. 11).

Egnasia usurpatalis, Walker, Catal. Lep. Het. B. M. xvi. p. 219 (1858), ♀.

Pale purplish-ferruginous, exterior borders brightest coloured; sparsely speckled with minute black scales: forewing with a basal olive-green band, a subbasal transverse waved olivaceous line, an indistinct brown medial undulated line, a discal pale centred blackish duplex outwardly-curved line, a submarginal sinuous blackish-speckled line ending on the costa in a dilated olivaceous streak; an intermarginal row of black dots; a black-speckled punctiform spot in middle of the cell: hindwing with a blackish-speckled lunular streak at end of the cell, a transverse discal pale-centred blackish duplex line, a submarginal sinuous line ending in a large subanal spot; an intermarginal row of dots. Thorax ferruginous; collar and vertex olive-green; apex of palpi with a blackish band; fore and middle tarsi with blackish bands.

Expanse $1\frac{1}{8}$ inch.

ZETHES SOLUTA.

Thermesia soluta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1061 (1865).

"Male. Ferruginous, testaceous beneath. Wings testaceous, slightly speckled with black, partly shaded with brown; exterior and submarginal lines pale, denticulated, partly bordered with black; submarginal points black; marginal line pale. Forewings with the interior line pale, oblique, abruptly retracted in front; middle line blackish, undulating, diffuse; submarginal line hardly denticulated, but forming a distinct angle; exterior border forming a slight angle to which a broad brownish streak proceeds from the exterior line; a large dark brown triangular costal subapical spot containing three whitish costal points.

"Expanse 14 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

ZETHES CRISTIFERA.

Ephyrodes cristifera, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1071 (1165), ♀.
Catada epops, Felder and Rogenh. Nov. Voy. Lep. iv. pl. 120, fig. 42 (1874), ♂.

Lilacine ochreous-grey: forewing very sparsely speckled with minute purple-brown scales; crossed by, apparently six, inwardly-oblique very indistinct pale brown lilacine-bordered waved fasciæ, the second inner one ending in a costal cluster of purple-brown scales; extending upward from the posterior angle is a duplex row of prominent purple-brown-speckled linear spots; a similar coloured spot also below the apex; and a marginal denticulated line; a purplish-brown speckled spot also in middle of the cell, and a similar ill-defined reniform mark: hindwing ochreous-grey, with a transverse discal indistinct slender brown fascia, and a broader submarginal

fascia. Thorax, and crest, and base of abdomen, head, palpi, forelegs, and all the tarsi speckled with dark purple-brown; legs and tarsi also with white terminal bands.

Expanse $1\frac{1}{2}$ inch.

ZETHES RENALIS (Plate 172, Fig. 12).

Forewing pale ferruginous-brown, crossed by an inwardly-oblique pale bordered blackish subbasal and antemedial line, both of which are bent inward to the costa from the subcostal vein; a similar dorsal line, which is acutely angled outward at the upper median, followed by a sinuous submarginal line and an intermarginal row of lunular spots; a pale-bordered brown reniform mark at end of the cell; from the costa before the submarginal line is a greyish-white fascia; the lines also bordered outwardly with darker ferruginous-brown: hindwing dusky ferruginous-brown, paler at the base in the female; crossed by two or three short waved slender pale lines from the anal angle, followed by an intermarginal row of black spots. Tarsi with dark brown bands.

Expanse ♂ ♀ 1 inch.

Genus EGNASIA.

Egnasia, Walker, Catal. Lep. Het. B. M. xvi. p. 216 (1858).

Wings short: forewing broad, costa slightly arched from the base, apex acute, exterior margin oblique, sinuous, angulated outward in the middle; cell extending to half the length; first subcostal emitted at more than half before end of the cell, second at one-fourth, trifid, third at one-fourth from base of second, and fourth at three-fourths from base of third, fifth from end of cell, and slightly touching third near its base; discocellular slender, concave, bent near lower end, radials from upper end and lower angle; middle median from angle near end of the cell, lower at more than half before the end; submedian much curved: hindwing broad, exterior margin convex, acutely sinuous; cell extending nearly half the length; first subcostal emitted at nearly one-half before end of the cell; discocellular very slender, outwardly recurved, radial from the middle; two upper medians from end of the cell, lower at nearly one-half before the end; submedian and internal straight. Body moderately slender; palpi very long, obliquely ascending, pubescent, second joint slightly curved, attenuated at its apex, third joint long, slender, lanceolate; antennæ in the male ciliated, and with long fine lashes; legs rather long, very slightly pilose, basal joint of hind tarsi also pilose above; spurs long.

EGNASIA BINORBICULATA (Plate 172, Fig. 6, ♂).

Male. Ochreous-brown; both wings clouded with greyish-brown apically: forewing crossed by a blackish zigzag erect antemedial line, a medial undulated line which is outwardly curved beyond the cell, followed by a similar discal sinuous line,

a pale sinuous submarginal indistinct line, and a blackish lunular marginal line; two semidiaphanous-white black-bordered obliquely-superposed spots in middle of the cell, and a large white trilobed clavate reniform mark: hindwing with a semi-diaphanous-white black-bordered excavated narrow mark at end of the cell, beyond which is a transverse blackish diffused discal line and a slender submarginal sinuous line. Cilia partly ochreous-white. Palpi, forelegs, and tarsi with white bands.

Expanse ♂ $1\frac{1}{4}$ inch.

EGNASIA SCOPIGERA (Plate 172, Fig. 9, ♂).

Male. Ochreous-brown, basal area mottled with ochreous-yellow: forewing crossed by a blackish postmedial incomplete-duplex ochreous-bordered zigzag line, followed by a submarginal sinuous ochreous line, and a marginal row of blackish lunules; a semidiaphanous-white orbicular spot and a lunular reniform mark; apical and posterior border mottled with ochreous: hindwing with a semidiaphanous-white lunular mark at end of the cell; a transverse diffused ochreous-bordered blackish sinuous line, a submarginal ochreous sinuous line, and a marginal blackish lunular line. Cilia bordering the black lunular line streaked with ochreous. Palpi ochreous, speckled with brown, third joint of palpi broadly tufted above, the tuft blackish, second joint very long, recurved upward, third joint two-thirds the length of second.

Expanse ♂ $1\frac{1}{4}$ inch.

EGNASIA CINGALENSIS (Plate 172, Fig. 10).

Egnasia Cingalensis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1178 (1865), ♀.

Purplish ferruginous-brown, varying to cinereous-brown: forewing with indistinct blackish transverse subbasal, antemedial, and a medial diffused waved line, an angulated discal line, a sinuous submarginal line, and a slender black-pointed marginal line; an ochreous-brown costal patch between the discal and submarginal lines; a black punctiform orbicular spot, and a lunular mark at end of cell: hindwing with a black spot at end of the cell, an indistinct transverse discal and submarginal waved line, and a slender marginal line.

Expanse $\frac{9}{10}$ inch.

EGNASIA OCELLATA (Plate 174, Fig. 4).

Male. Cinereous-brown: forewing crossed by five equidistant indistinct blackish lines, which are bent inward to the costa and there terminate in a pale streak, the three inner lines undulated, the two outer lines sinuous, the middle line diffused and partly enclosing an indistinct cinereous-bordered blackish ocellated reniform mark at end of the cell: hindwing crossed by a medial diffused blackish band encompassing a cinereous-bordered black ocellated spot at end of the cell; discal

and submarginal sinuous lines very indistinct. Tarsi dark brown, with white bands.

Expanse $\frac{8}{10}$ inch.

Genus MATELLA.

Forewing longer, narrower, with the exterior margin more even, and less angulated, than in typical Egnasia: hindwing not so broad, exterior margin more oblique, less sinuous. Venation similar. Antennæ slender, with extremely fine scarcely-perceptible lashes; second joint of palpi longer, of equal width throughout its length, very laxly squamose; third joint very slender and thickly tufted at its base; legs slender; all the tarsi naked.

Type, M. accingalis.

MATELLA ACCINGALIS (Plate 172, fig. 7, ♂).

Egnasia accingalis, Walker, Catal. Lep. Het. B. M. xvi. p. 218 (1858), ♀.

Male. Brownish-ochreous. Female paler. Sparsely speckled with minute brown scales: forewing with a transverse antemedial, a medial, and a postmedial undulated blackish line; the middle diffused; a marginal lunular line; along the outer border are some clusters of purplish-black speckled scales, of which the subapical form a prominent blackish patch; a semidiaphanous-white black-bordered orbicular spot and an excavated reniform mark: hindwing with a semidiaphanous-white blackish-bordered lobate spot at end of the cell; an indistinct medial diffused blackish line, a discal undulated slender line, and a marginal lunular line. Palpi white, speckled with black; forelegs dark brown; hindlegs whitish, slightly black speckled; all the tarsi ochreous.

Expanse, ♂ 1, ♀ $1\frac{1}{10}$ inch.

MATELLA PARTICIPALIS.

Egnasia participalis, Walker, Catal. Lep. Het. B. M. xvi. p. 218 (1858), ♀.

"Female. Brownish-ochreous, partly speckled with fawn colour. Wings with the submarginal line blackish, slender, hardly undulating; exterior line diffuse, indistinct, contiguous to a vitreous spot, which represents the reniform mark; marginal lunules brown, slender, connected: forewings with the interior line distinct, brown, hardly undulating; reniform mark excavated on the outer side, orbicular forming a vitreous dot. Third joint of palpi whitish, with a slight blackish tuft towards the base."

Expanse $1\frac{1}{10}$ inch.

This species is darker coloured than *M. accingalis:* forewing with the outer line more erect and ending nearer the posterior angle, the orbicular and reniform

mark twice the size: hindwing with the outer line also ending nearer the anal angle, and the spot at end of cell larger and lobiform.

Genus NAGADEBA.

Nagadeba, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1521 (1865).

Forewing elongated, costa slightly arched at the base, apex very acute, exterior margin convex, scalloped, angular in the middle, posterior margin long; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell and joined to base of the third by a short spur; discocellular inwardly oblique, radials from near each end; middle median from close to end of the cell, lower at nearly one-half before the end; submedian nearly straight: hindwing rather long, exterior margin oblique, scalloped; cell extending to one-third the length; two subcostals from end of the cell; discocellular inwardly oblique, radial from near the middle; two upper medians from end of the cell, lower at nearly one-half before the end; submedian and internal vein straight. Body slender; palpi curving upward in front, very long and slender, squamose, second joint pilose above in the male, third joint lanceolate, two-thirds the length of second, tufted in the middle in the male; antennæ minutely ciliated, with a few fine longer lashes; legs slender, long; spurs long.

NAGADEBA INDECORALIS (Plate 174, Fig. 3).

Nagadeba indecoralis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1521 (1865), ♀.

Male and female. Violaceous-brown; sparsely speckled with minute greyish-white scales: forewing crossed by a slender undulated subbasal and an outward-curved discal greyish-white speckled line; the outer border traversed by similar speckled sinuous lines, and with a cluster of speckles on the costa before the apex; each of the lines ending prominently on the costa: hindwing with a transverse waved discal slender greyish-white speckled line, followed by outer sinuous lines. Body, palpi, and legs grey speckled; abdomen with slender greyish-white segmental bands; tarsi with grey bands.

Expanse, ♂ $\frac{6}{10}$, ♀ $\frac{7}{10}$ inch.

Genus DAXATA.

Daxata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1108 (1865).

Forewing elongated, apex hardly acute, exterior margin convex, sinuous, posterior margin long; cell extending to more than half the length: first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, third at one-sixth from base of second, and fourth at one-half from base of third; fifth from end of the cell and very slightly touching third near its base; discocellular slender, almost erect, slightly bent near each end, radials from the angles; middle median at

one-fifth before end of the cell, lower at nearly one-half before the end; submedian almost straight: hindwing short, exterior margin slightly convex, sinuous; cell extending to nearly half the length; two subcostals from end of the cell; discocellular slender, nearly erect, radial from near lower end; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body moderately stout; palpi curved upward, rising half its length above the vertex, slender, squamose, second joint extending one-third above the vertex, third joint one-third the length of second, lanceolate, second and third joints slightly tufted at the tip; antennæ setose; legs long, rather slender, smooth; spurs very long and slender.

DAXATA BIJUNGENS (Plate 174, Fig. 9).

Daxata bijungens, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1109 (1865).

Dark ferruginous-brown: forewing crossed by a black subbasal, an antemedial, and a postmedial undulating line, the latter bicurved outward beyond end of the cell; each line being dilated at the costal end and there bordered by a pale spot; a submarginal pale sinuous line, beyond which is a marginal row of black lunules; some pale spots on the costa before the apex; a black punctiform orbicular spot and a pale-centred reniform mark: hindwing crossed by three similarly disposed undulated black lines, two pale submarginal fasceæ, and a marginal row of black lunules. Palpi, and forelegs blackish.

Expanse $\frac{9}{10}$ inch.

Genus DIOMEA.

Diomea, Walker, Catal. Lep. Het. B. M. xiii. p. 1109 (1857).

Female. Wings moderately broad, clothed with short broad scales; slightly denticulated: forewing straight along the costa, much rounded at the apex; exterior margin convex, hardly obliquely; cell extending to half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fourth, trifid, fifth from end of the cell, and joined by a short spur to third near its base; discocellular bent near each end, almost straight in the middle, radials from the angles; middle median from angle close to end of the cell, lower at nearly one-third; submedian almost straight: hindwing short, exterior margin very convex; cell one-third the length; two subcostals from end of cell; discocellular inwardly oblique, bent in the middle, radial from below the angle; two upper medians from acute lower end of the cell, lower at one-third; submedian and internal vein straight. Body stout; thorax densely clothed with broad lax scales; palpi obliquely ascending, rather broad, compressed, slightly curved, pilose; second joint somewhat fusiform, extending half its length above the eyes, third joint about half length of second;

antennæ minutely pubescent; legs rather stout, densely pilose; tarsi stout, spurs long.

Type, D. rotundata.

DIOMEA ROTUNDATA.

Diomea Rotundata, Walker, Catal. Lep. Het. B. M. xiii. p. 1110 (1857).

Female. Dark ferruginous-brown: forewing crossed by an indistinct subbasal, an antemedial, and a postmedial pale undulated line, each line ending in a white costal dot; a prominent postmedial black denticulated line with white points, the upper end of which is broadly white speckled; a marginal row of black spots, each of which is outwardly bordered by ferruginous; basal and medial areas crossed by ill-defined blackish-speckled undulated bands, and on the submarginal area is a similar zigzag band; orbicular and reniform mark black: hindwing with a large black cell spot, a discal transverse black denticulated line with white points, and a marginal row of black spots. Tarsi and third joint of palpi black, with whitish bands.

Expanse $1\frac{1}{4}$ inch.

Genus HINGULA.

Hingula, Moore, Desc. Lep. Coll. Atk. p. 180 (1882).

Forewing elongated, narrow, apex acute; exterior margin short, waved, convex hindward; cell extending more than half the wing; first subcostal emitted at more than one-half before end of the cell, second at one-fourth, trifid, third from below second immediately above end of cell, fourth from below third close to apex; fifth from end of the cell, bent upward and touching third near its base; discocellular bent at each end, radials from the angles; middle median close to end of the cell, lower at one-half before the end; submedian nearly straight: hindwing short; exterior margin convex, waved; cell short, extending to one-third the wing; two subcostals from end of the cell; discocellular slightly concave, bent near lower end, radial from the angle; two upper medians from end of the cell, lower at one-half before the end; submedian and internal straight. Body slender in male, rather stout in female; palpi ascending, second joint extending half beyond the head, broad at anterior end, squamose, third joint one-third its length, slender, pointed; antennæ very minutely pectinated; legs squamose.

HINGULA FIGURATA (Plate 174, Fig. 10, ♂).

Male. Greyish-brown: forewing crossed by an inwardly-oblique black subbasal and an antemedial undulated line, and an outwardly oblique curved irregular postmedial duplex line, the two latter lines inwardly bordered with ferruginous-brown at their upper end, their interspace clouded with black, and enclosing a large black semicircular orbicular spot and a quadrate reniform mark, the outer and inner sides

of which are bordered by a white line, the inner white lines joining together on the subcostal vein; below the cell is a smaller similar-bordered semicircular black spot; some white-bordered ferruginous-brown short streaks on the end of the costa, a spot immediately below the apex, and a marginal row of lunules with white inner borders: hindwing with a transverse discal waved duplex black line, two whitish streaks crossing the cell; the outer border clouded with black, followed by a marginal row of whitish-bordered black lunules; interciliary edge of both wings ferruginous-brown and longitudinally traversed by waved black lines. Body, palpi, and legs greyish-brown; forelegs with darker brown bands.

Expanse ♂ $\frac{7}{10}$ inch.

Family THERMESIIDÆ.

Wings not angular or notched, rarely denticulated; antennæ with the setæ more or less conspicuous in the male; those of the female extremely minute. Body smooth, more or less slender; frontal tuft extending between the eyes and acuminated; palpi long, slender, ascending, advanced in front, third joint generally long and linear. Larva with 16 legs; or semilooped and with 14 legs. Pupa in a slight shell.

Genus PLATYJA.

Platyja, Hübner, Verz. bek. Schmett. p. 268 (1818-25).
Sympis (group ii.), Guénee, Noct. iii. p. 343.
Sympis (part), Walker, Catal. Lep. Het. B. M. xv. p. 1548.
Cotusa, Walker, *id.* xv. p. 1551 (1858).
Ginea, Walker, *id.* xv. p. 1637 (1858).

Male. Forewing broad, much arched at the end, apex acute, falcate, exterior margin oblique, even, posterior angle very convex; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at one-fifth from base of second and fourth at two-thirds from base of third, fifth from end of cell and slightly touching third near its base; discocellular concave, radials from upper end and close to lower end; middle median from angle close to end of the cell, lower at nearly one-third; submedian slightly bent near the base: hindwing short, very broad, costa prolonged, apex bluntly angular, exterior margin very oblique, even, angulated at end of submedian vein, abdominal margin short; cell one-third the length, broad; two subcostals from the end; discocellular outwardly oblique, concave, radial from close to lower end; middle median from angle very close to end of cell, lower at about one-fourth; submedian and internal vein curved. Body stout, thorax laxly clothed; palpi ascending, second joint reaching the vertex, thick, laxly squamose, third joint one-fourth length of second; antennæ long, bipectinated, the branches finely ciliated; legs stout, fore femora and tibiæ

laxly pilose, middle femora beneath and tibiæ above thickly pilose, hind femora and tibiæ densely clothed with long hairs; hind tarsi also pilose above; spurs short.

Type, P. Umminia.

PLATYJA UMMINIA (Plate 173, Fig. 6, 6a ♂ ♀).

Phalæna Noctua Umminia, Cramer, Pap. Exot. iii. p. 137, pl. 267, fig. F. (1782), ♀.
Platyja Umminia, Hübner, Verz. bek. Schmett. p. 268 (1818-25).
Ophisma Umminia, Walker, Catal. Lep. Het. B. M. xiv. p. 1384.
Sympis subunita, Guénee, Noct. iii. p. 344 (1852), ♂.
Cotuza drepanoides, Walker, Catal. Lep. Het. B. M. xv. p. 1552 (1858), ♂.
Ginea remorens, Walker, Catal. Lep. Het. B. M. xv. p. 1638 (1858), ♀.
Ophisma trajecta, Walker, Char. Und. Lep. Het. p. 108 (1869), ♀.
Hulodes falcata, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 115, fig. 8 (1874), ♂.

Male. Dark olivescent-brown, the basal area suffused with purpurescent-brown.

Female. More uniformly purpurescent-brown: forewing with a very indistinct transverse subbasal, and a medial outwardly-oblique brown undulated line, and an outwardly-recurved discal denticulated line with minute whitish vein-points; an olive-brown streak extends obliquely from the apex to the discal line, the upper end of which below the apex is grey bordered; a blue-black punctiform orbicular spot, and a more or less defined reniform mark; on the disc in some specimens of both sexes is a prominent geminated white or red spot, which is divided by the lower median, the upper portion being also cut by a line, each portion also having a darker red inner-bordered line: hindwing with a discal curved denticulated brown line with white vein-points. Body, palpi, and legs brown; tarsi with pale bands.

Expanse $2\frac{1}{8}$ to $2\frac{3}{8}$ inches.

Genus SYMPIS.

Sympis (Group 1), Guénee, Noct. iii. p. 343 (1852).
Sympis (part), Walker, Catal. Lep. Het. B. M. xv. p. 1548.

Male and female. Forewing broad, rather short, triangular, apex acute, subfalcate, exterior margin convex hindward; cell extending nearly half the length; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, trifid, third at one-seventh from base of second and fourth at four-fifths from base of third, fifth from end of cell and slightly touching third near its base; discocellular inwardly-oblique, very slender, radials from upper end and near lower end; middle median from close to end of cell, lower at two-fifths; submedian curved: hindwing short, broad, exterior margin very convex; cell one-third the length; two subcostals from end of the cell; discocellular deeply concave, radial from near lower end; two upper medians from end of cell, lower at one-fourth; submedian and internal vein slightly curved. Body moderately robust, abdomen conical; palpi vertical, long,

compressed, first joint pilose, second joint laxly squamose at the side, pilose above, ascending above the vertex, third joint lanceolate, squamose, two-thirds the length of the second; antennæ in the male tufted at the base, finely ciliated, and with long lashes; legs strong pilose, tibiæ stout, basal joints of middle and hind tarsi pilose above in the male; spurs slender.

SYMPIS RUFIBASIS (Plate 173, Fig. 5, 5a, ♂ ♀).

Sympis rufibasis, Guénee, Noct. iii. p. 344, pl. 24, fig. 1 (1852); Walker, Catal. Lep. Het. B. M. xv. p. 1549.

Forewing with the basal half light-red, the outer half cuprescent-brown; crossed by an outwardly-oblique slender medial pearly-white centred black-edged band, the outer edge of which is denticulated and bordered by a purple-brown fascia; a black punctiform orbicular spot, and a less defined reniform mark; beyond the cell is a red jagged spot, which in some specimens is either round, oval, slender, or obsolescent; an indistinct brown submarginal sinuous line: hindwing dusky-brown at the base, cuprescent-brown externally, with a broad blackish fascia from the apex, and crossed by a medial more or less defined narrow pale brownish-white fascia. Thorax red; abdomen, head, and palpi reddish-brown; legs greyish, brown-speckled.

Expanse $1\frac{5}{8}$ inch.

Genus SENERATIA.

Wings rather short: forewing somewhat broad, costa arched from the base, apex acute, exterior margin almost erect, slightly convex, posterior margin long, convex; cell long, narrow, extending more than half the length; first subcostal emitted at two-thirds before end of the cell, second at two-fifths, trifid, third at nearly half from base of second and fourth at two-thirds from base of third, fifth from end of cell and joined to third by a short spur at its base; discocellular bent in the middle, radials from close to each end; middle median from angle close to end of the cell, lower at two-fifths before the end; submedian much curved: hindwing broad, exterior margin very convex; cell extending one-half the length; two subcostals from end of the cell; discocellular concave, radial from lower end; two upper medians from end of the cell, lower at two-fifths; submedian and internal vein straight. Body slender, palpi obliquely ascending, very broad, compressed, stout, second joint rising half above the vertex, very laxly squamose, third joint linear, compressed, acute at the tip, half length of the second; antennæ in the male very long, of the same length as the costa, finely bipectinated to the tip; antennæ in female shorter and setaceous; legs long; forelegs compactly pilose, middle and hindlegs slightly pilose; spurs long, slender.

Type, S. præcipua.

SENERATIA PRÆCIPUA (Plate 173, Fig. 2, ♂, 2*a* ♀).

Thermesia præcipua, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1056 (1865), ♀.

Male and female. Dark reddish-brown, washed with purplish-grey: forewing crossed by four equidistant darker brown zigzag lines, and a submarginal pale ochreous denticulated line, the latter ending on the costa in a broad dilated dark purple-brown pale-bordered patch; a dark brown streak also at end of the cell: hindwing crossed by three equidistant medial darker brown sinuous lines, the outer line with pale ochreous points. Body reddish-brown; collar and head ochreous-brown; legs dark brown.

Expanse, ♂ $1\frac{6}{8}$, ♀ $1\frac{7}{8}$ inch.

Genus HYPOSPILA.

Hypospila, Guénee, Noct. iii. p. 358 (1852); Walker, Catal. Lep. Het. B. M. xv. p. 1577.

Male. Forewing elongated, narrow, costa almost straight, exterior margin oblique, posterior margin convex at the base and laxly fringed in the middle; cell narrow, extending more than half the length; first subcostal emitted at one-half before end of the cell, second at one-tenth, trifid, third at one-fifth from base of second and fourth at two-thirds from base of third, fifth from end of cell and slightly touching third at its base; discocellular inwardly-oblique, radials from the ends; middle median from angle immediately before end of the cell, lower at nearly one-half; submedian much recurved: hindwing short, costa arched at the base, with a naked scabrous streak between the middle of costa and subcostal, and with lax long hairs along the base of median and submedian; apex convex, exterior margin oblique, convex; cell short, broad, one-third the length; costal vein recurved, subcostal bent downward and forming upper end of the cell, first subcostal emitted from the upper angle; discocellular short, slender, radial from near lower end; two upper medians from end of cell, lower at two-fifths; submedian and internal vein straight. Thorax moderately stout, abdomen long, slender in male, head with a prominent pointed tuft in front in both sexes; palpi ascending, second joint reaching above the eyes; broad, compressed, very laxly squamose, third joint linear, compressed, projecting in front of the head, half length of second; antennæ long, finely ciliated and with longer fine lashes; legs long, fore femora and tibiæ thickly pilose beneath, middle and hind tibiæ clothed above with shorter hairs; spurs long.

Female. Wings somewhat broader; body stout; antennæ setaceous: hindwing with the two subcostals from end of cell.

HYPOSPILA BOLINOIDES.

Hypospila bolinoides, Guénee, Noct. iii. p. 358 (1852); Walker, Catal. Lep. Het. B. M. xv. p. 1578.
Thermesia signipalpis, Walker, Catal. Lep. Het. B. M. xv. p. 1572 (1858), ♀.

Male. Ferruginous-brown, suffused with violet-brown in some lights: forewing

with an indistinct black inwardly-oblique basal, antemedial, and a postmedial transverse denticulated line, followed by a discal straight pale-centred duplex line, beyond which is a pale sinuous fascia and a slender black denticulated pale-pointed marginal line; between the two middle lines is a transverse blackish zigzag fascia, which encloses a white reniform spot; a black punctiform orbicular spot also within the cell; the area between the fascia and straight discal line being paler brown: hindwing cinereous-brown at the base, crossed by a medial zigzag black line, a pale-centred duplex straight discal line, a pale sinuous fascia, and a pale-pointed marginal line. Palpi, and frontal tuft beneath, knees, and bands on tarsi dark violet-brown.

Female paler, the markings less distinct.

Expanse $1\frac{4}{10}$ to $1\frac{5}{10}$ inch.

Genus AZAZIA.

Azazia, Walker, Catal. Lep. Het. B. M. xv. p. 1576 (1858).
Thermesia (part), Guénee, Noct. iii. p. 353.

Forewing elongated, somewhat narrow, slightly arched towards the tip, apex almost subfalcate, exterior margin slightly convex; cell extending to half the length, first subcostal emitted at one-third before end of the cell, second at one-sixth, trifid, third at one-fifth from base of second and fourth at three-fourths from base of third, fifth from end of cell and touching third at its base; discocellular concave, bent at each end, radials from the angles; middle median from angle close to end of cell, lower at one-half; submedian almost angular near the base: hindwing short, exterior margin oblique and slightly convex; cell one-third the length; two subcostals from end of cell; discocellular slender, concave, radial from near lower end; middle median from immediately before end of cell, lower at one-third; submedian and internal vein straight. Body moderately stout; frontal tuft prominent, pointed; palpi obliquely ascending, reaching level of the vertex, second joint rather thick, laxly squamose, third joint lanceolate, one-third length of second; antennæ slightly bipectinated and ciliated; legs rather long, forelegs broadly pilose, middle and hind legs moderately pilose, spurs long and slender.

Type, A. rubricans.

AZAZIA RUBRICANS (Plate 173, Fig. 3 ♂, 3*a* larva).

Ophiusa rubricans, Boisduval, Faun. Ent. Madag. Lep. p. 106, pl. 16. f. 1 (1834).
Thermesia rubricans, Guénee, Noct. iii. p. 356.
Azazia rubricans, Walker, Catal. Lep. Het. B. M. xv. p. 1576.
Thermesia transducta, Walker, *id.* xxxiii. p. 1058 (1865), ♂.
Thermesia consueta, Walker, Char. of Undes. Lep. Het. p. 93 (1869).

Male. Dingy greyish ochreous-brown, minutely speckled with darker brown scales: forewing with a subbasal transverse curved undulated brown line, a medial

dusky wavy fascia, an oblique discal almost straight brown line, which is bent inward to the costa before the apex, followed by a blackish streak from the apex to the angle, and a submarginal series of grey-tipt blackish speckled points; a large brown-lined reniform mark enclosing a blackish speckled lunular discocellular streak; orbicular spot punctiform, grey and black speckled: hindwing with a dusky inner fascia, a medial transverse brown line and a submarginal series of grey-tipt black speckled spots. Palpi and legs ochreous-brown.

Female pale brownish-ochreous, or reddish-ochreous, with darker ochreous markings, similar to those of the male.

Expanse $1\frac{3}{8}$ to $1\frac{6}{8}$ inch.

Larva elongated; with 16 legs; green; with a prominent narrow white lateral band. Pupa purplish-red.

"Feeds on *Phaseolus, &c.*" (*Thwaites*).

Genus SANYS.

Sanys (Sect. 2), Guénee, Noct. iii. p. 349 (1852).

Forewing rather broad, apex acute, subfalcate, exterior margin slightly convex hindward; cell extending half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, fifth from end of the cell and slightly touching third near its base; discocellular extremely slender, concave, bent near each end, radials from the angles; middle median from close to end of cell, lower at one-fifth; submedian almost straight: hindwing broad, exterior margin oblique; cell one-third the length; discocellular extremely slender, radial from below the middle; two subcostals from end of cell; two upper medians from end of cell, lower at one-half; submedian and internal vein straight. Body rather slender; palpi slightly ascending, laxly squamose, second joint broad, compressed, third joint long, flat, slender; antennæ with closely-set pubescence; legs long, spurs long and slender.

Type, S. angulina.

SANYS RIVULOSA (Plate 174, Fig. 5).

Thermesia rivulosa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1060 (1865).

Cinereous-brown, numerously covered with minute black scales: forewing crossed by three indistinct subbasal, an antemedial, medial, and discal black speckled zigzag lines, followed by a submarginal pale-bordered lunular line, which is acutely bent inward to the costa before the apex; a pale streak between the veins, each ending in a black marginal point; the middle line partly forming a slender reniform mark; between the discal and submarginal line are some indistinct black-scaled dentate spots: hindwing with some indistinct black speckled outer transverse sinuous lines. Palpi and forelegs dark brown.

Expanse $1\frac{1}{8}$ inch.

Genus SONAGARA.

Sonagara, Moore, Desc. Lep. Coll. Atkinson, p. 179 (1882).

Forewing triangular; costa nearly straight, apex acute, exterior margin oblique and slightly convex, posterior angle pointed; first subcostal emitted at two-thirds before end of the cell, second, third, and fourth near end of the cell and at equal distance from the fifth, third terminating at the apex; discocellular bent at each end, concave in the middle, radials from the angles; middle median at one-fifth and lower at more than one-half before end of the cell: hindwing broadly triangular; exterior margin convex; first subcostal at nearly one-half before end of the cell; discocellular slightly oblique, bent inward at lower end, radial from the angle; middle median very near end of the cell, lower at one-third before the end; submedian and internal vein at equal distances from lower median. Body short, stout; palpi ascending and convergent at the tip, second joint stout, laxly squamose, third joint very short, conical; legs stout, tibiæ thick, laxly squamose; antennæ simple in both sexes.

Type, S. strigipennis.

SONAGARA SCITARIA (Plate 175, Fig. 1 ♀, 1*a* larva).

Drepanodes scitaria, Walker, Catal. Lep. Het. B. M. xxvi. p. 1488 (1862).
Anisodes pyriniata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1582 (1862).
Thermesia reticulata, Walker, *id.* xxxiii. p. 1062 (1865).
Homodes thermesioides, Snellen, Tijd. voor. Ent. 1877, p. 28, pl. 2, f. 15.

Male and female. Reddish-ochreous; crossed by numerous slender red strigæ; with an oblique purplish-brown line extending from apex of the forewing to middle of the abdominal margin of the hindwing. Body red; palpi at the tip, forelegs, and all the tarsi dark purplish-brown; tarsi with white bands, palest in the female.

Expanse, ♂ $\frac{7}{8}$, ♀ $1\frac{1}{8}$ inch.

Larva with 16 legs; cylindrical; with a few fine short dorsal hairs; olivaceous, with a few transverse series of black dots on third to last segment; second segment ochreous; head blackish. Pupa dark purplish-brown.

Genus DUNIRA.

Wings broad: forewing elongated, costa almost straight, apex pointed, exterior margin slightly oblique; cell narrow, extending more than half the length; first subcostal emitted at one-third before end of the cell, second at one-ninth, trifid, fifth from end of cell and slightly touching third close to its base; discocellular slightly concave, radials from close to the ends; middle median from near end of the cell, lower at one-third; submedian almost straight: hindwing short, broad, quadrate, exterior margin angular at end of the lower median vein, abdominal margin short;

cell one-half the length; two subcostals from end of cell; discocellular outwardly-oblique, radial from below the middle; two upper medians from end of cell, lower at one-third; submedian and internal vein straight. Body moderately slender, abdomen in male extending beyond hindwings; palpi erect, somewhat slender, squamose, second joint reaching the vertex, third joint long, two-thirds the length of second, lanceolate; antennæ setaceous; legs slightly pilose.

Type, D. scitula.

DUNIRA NISALIS.

Hypena Nisalis, Walker, Catal. Lep. Het. B. M. xix. p. 845 (1859).
? *Hypena rubripunctalis*, Walker, Catal. Lep. Het. B. M. xvi. p. 233 (1858).

"Pale fawn colour, rosy speckled; whitish beneath. Wings above with several slight denticulated rosy lines, and with black submarginal points; marginal lunules rosy: forewing with two or three ochraceous denticulated lines, and with an exterior partly ochraceous band; costa with black points. Third joint of palpi white, with three black bands; fore tibiæ with rosy dots; middle tibiæ deep rosy above.

"Expanse 11 lines."

DUNIRA SCITULA (Plate 174, Fig. 13).

Thermesia scitula, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1061 (1865).

Reddish-cinereous. Wings red speckled: forewing with a brown-bordered olive-green basal band; an indistinct reddish-brown transverse antemedial undulated line, and a similar medial line, followed by a denticulated discal line, a submarginal cinereous-bordered white lunular line, and a marginal row of black points; a punctiform black spot in middle of the cell, and two at its end: hindwing crossed by a discal reddish-brown undulated line, a submarginal cinereous-bordered white lunular line, and a marginal row of black points; a blackish lunular spot at end of the cell. Fore tarsi with blackish bands; palpi and spurs with black tips.

Expanse $1\frac{1}{10}$ inch.

Remark. This insect has much the appearance of *Hypena incongrualis*, both in respect to outward form of wings and markings.

Genus MESTLETA.

Mestleta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 829 (1865).

Forewing short, broad, triangular; apex acute, exterior margin slightly oblique and almost angular in the middle; cell disposed towards the middle and extending half the length; first subcostal emitted at one-half before end of cell, second at one-fourth, trifid, fifth from end of cell, free; discocellular almost erect, radials from near the ends; middle median at one-third, lower at one-half; submedian recurved:

hindwing short, exterior margin very convex; cell one-third the length; two subcostals from end of cell; discocellular slightly concave, radial from near lower end; two upper medians from end of cell, lower at one-third. Body stout, smooth; palpi broad, compressed, obliquely ascending, not reaching higher than the vertex, second joint with short hairy scales in front, third joint extremely small, blunt at tip; antennæ minutely setulose; legs stout, squamous; spurs long and stout.

Type, M. abrupta.

MESTLETA ABRUPTA (Plate 174, Fig. 2 ♂, 2*a* larva).

Mestleta abrupta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 829 (1865), ♂.
Eutelia hypætroides, Walker, MS. Brit. Mus. Coll.

Pale purplish ochreous-red: forewing with a prominent purplish-grey centred black oblique discal duplex line, of which the inner side is broadest and bent inward to the costa before the apex, and is also continued in its duplex form across the middle of the hindwing; forewing also with a subbasal transverse indistinct blackish sinuous line; a white pointed outer discal line, and a similar submarginal line; a large ochreous-white spot at the apex: hindwing with an indistinct blackish spot in middle of the cell, a transverse discal and a submarginal sinuous white-pointed line, the latter ending in black anal spots. Tarsi with white bands.

Expanse $\frac{7}{10}$ inch.

Larva semilooped; with 12 legs; 6th, 7th, 8th and 12th segments with a conical prominence; 5th to last segment with a few short erect dorsal hairs; 3rd, 4th, and 5th segments also with four erect black spatular hairs; colour reddish, with black streaks and lateral dots, transverse yellowish lateral stripes, and an oblique white stripe across 10th and 11th segments. Pupa reddish, enclosed in a small cocoon attached to a leaf.

"Feeds on *Ficus parasiticus*" (*Thwaites*).

MESTLETA ANGULIFERA (Plate 175, Fig. 2 ♀, 2*a* larva).

Mestleta angulifera, Moore, Desc. Lep. Coll. Atk. p. 179 (1882).

Pale purplish-ochreous: forewing crossed by an oblique medial narrow brown band which is acutely bent inward to the costa near its upper end, an antemedial and a postmedial slender sinuous brown line, both bent inward at the costal end; a slight brown pale-bordered oblique streak from the apex, which is continued hindward in a blackish sinuous line; a slender pale-bordered brownish marginal line: hindwing with a narrow brown medial transverse band and two indistinct outer sinuous lines. Underside pale brownish-ochreous. Thorax, palpi, and legs ochreous-brown; abdomen and band on the tarsi greyish-ochreous.

Expanse $\frac{7}{8}$ inch.

Larva with 12 legs; ochreous-brown. Pupa reddish, enclosed in a small dark brown cocoon.

MESTLETA LUNIFERA (Plate 175, Fig. 3, ♀).

Pale vinous-brown, minutely black-speckled: forewing with a broad pale vinaceous costal band, which also crosses the extreme base of the hindwing, where it is almost of a white colour: forewing also with some indistinctly formed transverse black-speckled sinuous lines, a discal angulated line, a prominent pale vinous submarginal line, the upper end of the latter being red before it reaches the costal band, and is there bordered within by a pure white curved streak; a marginal row of black dots; apex below the band and adjacent cilia dusky-brown: hindwing with indistinct blackish-speckled discal sinuous line, a prominent pale vinous angular discal line with bordering black-speckled spots, the spots being more distinct towards anal angle; a marginal row of black dots. Thorax, base of abdomen, and front of head pale vinous-brown.

Expanse $1\frac{1}{10}$ inch.

MESTLETA INTERRUPTA (Plate 175, Fig. 7).

Pale brownish ochreous-white, the outer border suffused with pale ochreous-brown: forewing with a few minute ochreous-brown scales scattered over the basal area; crossed by a prominent inwardly-oblique discal ochreous-brown band, which is diffused on its inner border, and is cut before the apex by an inwardly-oblique white line to the costa, and has a contiguous subapical black spot; beyond the band is a row of very minute black dots, followed by a submarginal indistinct sinuous line; some black streaks on the costal edge: hindwing with a short ochreous-brown band above the anal angle, and a marginal row of blackish speckles. Thorax, head, palpi, and forelegs ochreous-brown; abdomen ochreous-white

Expanse $\frac{7}{10}$ inch.

MESTLETA IRRECTA (Plate 174, Fig. 1 ♂, 1*a* larva).

Selenis irrecta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1066 (1865).
Selenis niviapex, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1069 (1865).

Ferruginous-brown: forewing with a broad white-speckled costal band, which also crosses the extreme base of the hindwing, the band being most sharply defined along its posterior edge; crossed by a slender white discal line, which is bent inward to the costa beyond end of the cell; a submarginal white lunular line, and a marginal row of white-bordered black dots; a short white-bordered black streak obliquely before the apex: hindwing crossed by a slender white undulated line, a submarginal blackish-spotted lunular line, and a marginal row of white-bordered black dots.

Thorax and base of abdomen crossed by a broad white band; forelegs with pale bands.

Expanse $\frac{8}{10}$ inch.

Larva semilooped; with 12 legs; minutely hairy; a pointed lump on 12th segment; colour purplish-black. Pupa reddish, enclosed in a small reddish cocoon attached to a twig.

MESTLETA DIVISA (Plate 174, Fig. 7).

Selenis divisa, Walker, Trans. Ent. Soc. Lond. 3rd ser. I. p. 107 (1861).
Selenis semilux, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1069 (1865).

Dusky ferruginous-brown: forewing with a broad ferruginous-white costal band, which also crosses the extreme base of the hindwing, and has some short pure white-bordered brown outwardly-oblique streaks on its costal edge, these streaks forming the upper ends of indistinct greyish-bordered black transverse sinuous lines; a marginal row of white outer-bordered black dots: hindwing with indistinct discal transverse ferruginous-brown bordered sinuous lines and a marginal row of white-bordered black dots. Thorax, and base of abdomen crossed by a broad ferruginous-white band; legs with pale bands.

Expanse $\frac{6}{10}$ to $\frac{8}{10}$ inch.

MESTLETA MULTIGUTTATA (Plate 174, Fig. 8).

Selenis multiguttata, Walker, MS. Coll. Brit. Mus.

Dull vinous-brown: forewing crossed by an indistinct antemedial and a discal white-dotted black sinuous line, both of which are bent inward to the costa, followed by a more distinct submarginal and marginal row of white spots, of which those at the apex are the largest; a white orbicular spot and a reniform spot: hindwing with two white dots within the cell, four confluent irregular discal rows of white spots, and a marginal row of smaller spots. Thorax with a whitish transverse band, abdomen with white dorsal spots.

Expanse $\frac{7}{10}$ to $\frac{9}{10}$ inch.

MESTLETA CEYLONICA.

Thermesia ceylonica, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1061 (1865), ♀.

Female. Pale brownish-ochreous, minutely black speckled, the speckles being disposed somewhat in the form of ill-defined transverse strigæ; with a prominent oblique medial transverse straight purplish-black line, which extends from the apex to middle of abdominal margin of the hindwing: forewing with a small pale yellow spot below the apex, and an indistinct pale cinereous zigzag submarginal line; costal border broadly purplish-cinereous. Head, palpi, thorax, and bands on forelegs purplish-cinereous.

Expanse $1\frac{1}{10}$ inch.

Genus CAPNODES.

Capnodes, Guénee, Noct. iii. p. 374 (1852); Walker, Catal. Lep. Het. B. M. xv. p. 1600.

Wings short, triangular: forewing broad, apex not acute, exterior margin almost erect, very slightly convex; posterior margin long; cell extending half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end of cell and touching third close to its base; discocellular bent at each end, concave in middle, radials from the angles; middle median from angle close to end of cell, lower at two-fifths; submedian slightly recurved: hindwing broad, apex convex; cell less than one-third the length; two subcostals from end of cell; discocellular outwardly-oblique, concave, radial from near lower end; two upper medians from end of cell, lower at one-third; submedian and internal vein almost straight. Body moderately stout; frontal tuft pointed; palpi obliquely porrect, broad, much compressed, second joint extending two-thirds beyond the head, broad at its tip, laxly squamose at the side, pilose in front, third joint half length of second, slender and slightly clavate in male, compressed in female; legs rather long, slender, very slightly pilose; antennæ slender, setaceous.

CAPNODES TRIFASCIATA (Plate 174, Fig. 12).

Capnodes trifasciata, Moore, Proc. Zool. Soc. 1877, p. 612.

Ferruginous-brown: both wings crossed by a basal, subbasal, medial, and a discal dusky brown diffused sinuous line, a submarginal lunular line, and a marginal row of black lunular points; the subbasal and discal line of the forewing, and discal line of hindwing have the vein-points white, tipt with black; each of the lines on the forewing also end in a white costal spot, there are also three smaller costal spots before the apex; a black punctiform spot in middle of the cell and two spots at its end. Palpi, and legs greyish-brown.

Expanse $1\frac{3}{10}$ inch.

CAPNODES TETRASPILA.

Capnodes tetraspila, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1076 (1865), ♀.

"Female. Pale testaceous. Wings broad: forewings acute, with two blackish costal spots; first spot elongate, extending towards the middle of the disc; second spot apical: hindwings with brownish tips.

"Expanse 16 lines."

CAPNODES MACULICOSTA.

Capnodes maculicosta, Walker, Catal. Lep. Het. B. M. xv. p. 1608 (1858), ♂.
Capnodes finipalpis, Walker, *id.* xv. p. 1574 (1858), ♀.

Wings red, with purplish-grey reflections in some lights: forewing crossed by a diffused indistinct pale purplish-black undulated antemedial and a postmedial fascia,

the latter traversed by a row of white vein-points, beyond which is a marginal row of black points; a slender blackish lunular mark at end of the cell, and two large equidistant white spots on the costa: hindwing with a less distinct discal fascia traversed by white points, and a marginal row of black points. Body red; palpi cinereous; legs pale red.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{5}{8}$ inch.

CAPNODES MINOR (Plate 174, Fig. 11).

Red, sparsely speckled with minute blackish scales: forewing with four prominent white spots along the costa, the interspaces between the spots blackish-ferruginous; the first spot basal, fourth apical, second and third at equal distances between the others; a very indistinct black-scaled spot at end of the cell, and a black-scaled transverse discal denticulated line with white tipt points: hindwing with a very indistinct similar spot at end of the cell, and a transverse discal denticulated line with white tipt points. Palpi, and forelegs ferruginous-brown.

Expanse $\frac{6}{10}$ inch.

Genus GESONIA.

Gesonia, Walker, Catal Lep. Het. B. M. xvi. p. 75 (1858).

"Male. Wings small, moderately broad; fringe broad: forewings rectangular at the tips, almost straight and moderately oblique along the exterior margin. Body hardly stout; frontal tuft somewhat truncate at the tip; palpi short, porrect, hardly longer than the breadth of the head; second joint convex above, pilose beneath, third joint elongate-conical, less than half length of the second; antennæ serrated, ciliated; thorax squamous; abdomen rather flat, not extending beyond hindwings; legs rather stout, hardly pilose, hind tibiæ with long spurs."

Type, G. obeditalis.

GESONIA SECUNDALIS.

Gesonia secundalis, Walker, Catal. Lep. Het. B. M. xvi. p. 235 (1858), ♂.

"Male. Pale fawn colour: forewings with brownish diffuse very indistinct lines; exterior line undulating, accompanied by some brown marks; submarginal line denticulated; orbicular and reniform marks indicated by two blackish points; marginal points blackish, like those of the hindwings, in which the two exterior lines are visible. Abdomen and hindwings paler fawn colour; palpi ascending, brownish on the outer side, third joint short; antennæ with long pubescent bristles.

"Female. Forewings occasionally with some black marks by the exterior line.

"Expanse 10 lines."

Described by Mr. Walker from specimens in Mr. E. L. Layard's collection.

GESONIA OBEDITALIS.

Gesonia obeditalis, Walker, Catal. Lep. Het. B. M. xvi. p. 75 (1858), ♂.

"Male. Reddish-brown, mostly cinereous beneath: forewings with the interior and exterior lines blackish, denticulated, indistinct; some diffuse oblique undulating cinereous lines; one extending from the interior line to the base, obsolete in front; the others beyond the exterior line; marginal points black; orbicular spot black, punctiform, reniform forming an oblong ringlet which encloses a black point: hindwing cinereous, with black marginal points, and with two dark cinereous lines, which are almost obsolete above, but distinct beneath. Palpi dark brown, cinereous above; abdomen cinereous.

"Expanse 8 lines."

GESONIA SCITULA (Plate 174, Fig. 6).

Thermesia scitula, Walker, Catal. Lep. Het. B. M. xxxv. p. 1973 (1866), ♀.

Forewing purplish ochreous-red, crossed by an indistinct antemedial, postmedial, and a submarginal blackish-speckled zigzag line; reniform mark indistinct, blackish; marginal points blackish: hindwing pinkish-cinereous; cilia paler. Thorax ochreous-red; collar, head, palpi, and bands on tarsi brown, abdomen purplish-cinereous; forelegs reddish, hind legs paler.

Expanse $\frac{9}{10}$ inch.

Family AMPHIGONIIDÆ.

Wings ample, pulverulent, alike in colour and markings; exterior margin very angular, often unequally dentate. Body smooth, thorax villose; antennæ various as to structure; legs stout, very villose in male; tarsi bare; palpi abruptly ascending, extending above the head; securiform or recurved.

Larva semilooped, with 16 legs, the first two pair of middle legs aborted; with two small dorsal conical prominences on 12th segment.

Genus LACERA.

Lacera, Guénee, Noct. iii. p. 336 (1852); Walker, Catal. Lep. Het. B. M. xv. p. 1537.

Forewing elongated, triangular, exterior margin oblique, denticulated, angular in the middle; cell extending to more than half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, third at nearly one-fourth from base of second, and fourth at two-thirds from base of third, fifth from end of cell and slightly touching third close to its base; discocellular concave, bent near the ends, radials from the angles; middle median from angle close to end of the cell, lower at two-fifths; submedian slightly curved: hindwing short, broad, apex convex, exterior margin denticulated, almost angulated in the middle; cell broad, extending one-third the length; two subcostals from end of the cell; disco-

cellular outwardly-oblique, concave, radial from angle near lower end; two upper medians from end of the cell, lower at nearly one-third; submedian and internal vein straight. Body moderately stout; palpi ascending, second joint in male laxly squamose, reaching level of the eyes, broadest at the base, third joint about one-third length of second, linear, obtuse at the tip; antennæ in male setaceous, minutely ciliated; femora and tibiæ very densely pilose; spurs stout.

LACERA ALOPE (PLATE 173, FIG. 1 ♂, 1*a* larva).

Phalæna Noctua Alope, Cramer, Pap. Exot. iii. pl. 268, fig. E. F. (1782).

Lacera capella, Guénee, Noct. iii. p. 337, pl. 24, f. 13 (1852), ♂; Walker, Catal. Lep. Het. B. M. xv. p. 1537.

Dusky ferruginous-brown, numerously speckled with grey scales: forewing with a short subbasal costal pale ferruginous-bordered black zigzag line, a transverse outwardly-curved medial similar zigzag line, an irregularly undulated discal line, followed by a submarginal pale ferruginous sinuous line; an indistinct pale ferruginous reniform mark, which is most defined in the female; below the cell are some discal zigzag black marks; a pale ferruginous streak within the upper and lower angle of the discal line, both of which are most distinct in the male: hindwing with the outer border more dusky black and grey speckled, and with a discal and submarginal pale ferruginous-bordered black sinuous line; marginal lunules black. Thorax, and legs dusky ferruginous-brown; palpi bright ferruginous; tarsi, femora, and abdomen greyish-black.

Expanse $1\frac{6}{8}$ to 2 inches.

Larva long, slender, semilooped; with 16 legs, the two first pair of middle legs aborted; two small conical dorsal prominences on 12th segment; colour pale green, with indistinct darker green longitudinal dorsal strigæ; some minute black speckles on hind part of segments from the 5th, and a sublateral row of similar speckles; feet blackish. Pupa purple-red, efflorescent.

"Feeds on *Pironia* and *Canthum*" (*Thwaites*).

Genus AMPHIGONIA.

Amphigonia, Guénee, Noct. iii. p. 337 (1852); Walker, Catal. Lep. Het. B. M. xv. p. 1538.

Forewing elongated, triangular, apex acute and falcate, exterior margin acutely angular in the middle; cell extending half the length; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, third at one-fourth from base of second, and fourth at two-thirds from base of third, fifth from end of cell and slightly touching third near its base; discocellular concave, bent at each end, the radials from the angles; middle median from angle close to end of cell, lower at two-fifths before the end; submedian recurved: hindwing short, broad, quadrangular, exterior margin acutely angular in the middle; cell less than one-third the length;

two subcostals from end of the cell; discocellular concave, radial from close to lower end; two upper medians from end of cell, lower from about one-third; submedian and internal vein straight. Body stout; palpi ascending, second joint in the male very long, slender, much curved, extending to vertex, compactly squamose, third joint also long, slender, tufted in the middle, twisted and sometimes being bent over in front; second joint in female less curved, third joint about two-thirds its length, clavate; antennæ very minutely ciliated; legs densely pilose; spurs stout.

Type, A. hepatizans.

AMPHIGONIA HEPATIZANS (PLATE 173, FIG. 4).

Amphigonia hepatizans, Guénee, Noct. iii. p. 338, pl. 24, fig. 12 (1852); Walker, Catal. Lep. Het. B. M. xv. p. 1541.

Greyish purple-brown, the base and exterior borders paler: forewing with the basal area very sparsely speckled with pale whitish-tipt scales; crossed by a sub-basal, antemedial, medial, and a discal zigzag darker-brown line, each line bordered with pale speckles at the costal end, followed by a submarginal darker purple-brown fascia, the fascia being acutely angled on its outer edge below the apex and at the middle median vein, and bordered externally by grey and a zigzag purple-brown whitish-speckled bordered sinuous fascia, the curved interspace between the angles also traversed by a parallel slender olivaceous line; at the extreme apex is also a dark purple-brown patch, and the veins crossing the exterior border are speckled with whitish scales; an indistinct ochreous-brown reniform mark: hindwing crossed by a medial and a discal zigzag darker brown line; the apex and anal area clouded with purple-brown. Body, palpi, and legs sparsely speckled with minute pale whitish-tipt scales; tarsi, and tip of palpi ochreous.

Expanse 2 inches.

Family PLATYDIDÆ.

Wings ample, extended; alike in colour and markings; exterior margin always angular or bent, antennæ ciliated or pubescent; legs long, slender, fore tibiæ more or less thickened; palpi long, much ascending, extending above the head.

Genus CLATERNA.

Trigonia,* Guénee, Deltoides et Pyral. p. 11 (1852); Walker, Catal. Lep. Het. B. M. xvi. p. 3.
Brotis (part), Hübner, Verz. bek. Schmett. p. 303.
Claterna, Walker, Catal. Lep. Het. B. M. xv. p. 1543 (1858).

Forewing elongated, narrow, costa almost straight, exterior margin angulated at the end of upper median vein, convex below the angle, posterior margin short; cell more than half the length; first subcostal emitted at more than half before end

* Previously used by Geyer (Hübn. Zutr. V. p. 21), 1837, for a genus of Lepidoptera.

of the cell, second at one-fifth, trifid, third at one-fifth from base of second, and fourth at about two-thirds from base of third, fifth from end of cell and touching third close to its base; discocellular inwardly oblique, deeply concave, radials from near upper and lower ends; middle median from angle immediately below end of the cell, lower at one-fourth; submedian much curved from the base: hindwing somewhat quadrate, longer than broad, exterior margin uneven, angulated in the middle; cell broad, nearly two-fifths the length; two subcostals from end of the cell; discocellular bent in the middle, radial from near lower end; two upper medians from acute end of the cell, lower at one-fifth; submedian and internal vein straight. Body moderately slender; abdomen rather long in male; palpi erect, first and second joints very thick, broad, second extending two-thirds above the vertex, compressed, squamose, third joint fully half length of second, lanceolate, laxly squamose in front; antennæ in male finely ciliated and with a few long slender lashes, simple in female; forelegs short, thickly pilose, middle and hind tibiæ thick, slightly pilose at the apex; middle tibiæ also villose above; spurs long.

CLATERNA CYDONIA (Plate 175, Fig. 11, ♂).

Phal. Noctua Cydonia, Cramer, Pap. Exot. i. p. 34, pl. 22, fig. F. (1775).
Brotis Cydoniaria, Hübner, Verz. bek. Schmett. p. 303.
Herminia Sidonia, Guésin, Icon. Rég. Anim. pl. 90, f. 5.
Trigonia Cydonialis, Guénee, Delt. et Pyral. p. 12; Walker, Catal. Lep. Het. B. M. xvi. p. 4.
Focilla submemorans, Walker, Catal. Lep. Het. B. M. xv. p. 1533 (1858) ♀.
Claterna exagens, Walker, *id.* xv. p. 1543, ♂.

Greyish violaceous-brown: forewing with a transverse outwardly-curved white-speckled bordered blackish antemedial line, and an angulated discal duplex line, beyond which is a triangular costal spot before the apex, and from the lower angle of which depends a short white zigzag line; the costal interspaces between the discal line and triangular spot, and its lower line being streaked with dark brown; a slight brown lunular marginal line; base of wing also slightly speckled with white; a black punctiform orbicular spot and an obsolescent reniform mark: hindwing with a medial transverse white-speckled bordered blackish duplex sinuous line, and an outer marginal row of broad blackish lunules, which are inwardly bordered with white speckles. Body, palpi, and legs brown; tarsi and spurs white; abdomen with slender white segmental bands.

Expanse 1⅝ inch.

Genus EPISPARIS.

Episparis, Walker, Catal. Lep. Het. B. M. x. p. 475 (1856).
Neriasca, Walker, *id.* xvi. p. 7 (1858).
Pradiota, Walker, *id.* xxxv. p. 1572 (1866).

Male. Forewing elongated, rather broad, very slightly arched at the end, apex

acute, exterior margin slightly oblique and angular in the middle; cell more than half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, third at one-sixth from base of second, and fourth at two-thirds from base of third, fifth from end of cell and slightly touching third near its base; discocellular slightly concave, radials from close to each end; middle median from angle close to end of cell, lower at one-third; submedian recurved: hindwing quadrate, apex convex, exterior margin angular in the middle; cell two-fifths the length; two subcostals from end of cell; discocellular outwardly-oblique, slender, slightly concave, radial from near lower end; two upper medians from end of the cell, lower at about one-fourth; submedian and internal vein straight. Body moderately stout, palpi ascending, laxly squamose; second joint reaching level of the eyes, third short, one-fifth length of the second, blunt at the tip; antennæ in male broadly bipectinated to one-third the length, the branches densely ciliated; setose in female; legs slightly pilose; spurs long.

Type, E. penetrata.

EPISPARIS VARIALIS (Plate 175, Fig. 12, ♂).

Neviasca varialis, Walker, Catal. Lep. Het. B. M. xvi. p. 7 (1858), ♂ ♀.
Episparis signata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1032 (1867), ♂.
Episparis Davallia, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 120, f. 41 (1874), ♀.

Lilacine ochreous-brown: forewing with the disc and apex traversed by an ochreous fascia; crossed by an indistinct subbasal, and an antemedial outwardly curved lilacine-white bordered brown line, and an undulated discal line, each line dilated at the costal end, beyond which is a marginal row of chestnut-brown lunules, the upper lunule being large and extending from the apex to the middle angle, the lunules also being bordered within by a slender lilacine-white line; a black punctiform orbicular spot, and a large bilobate pure white reniform mark: hindwing with the disc clouded with ochreous; crossed by a brownish discal angular line, a lilacine-white bordered slender brown submarginal line, and chestnut-brown marginal lunules, which are inwardly bordered by a lilacine-white line. Cilia dark brown towards the apex. Body, head, palpi, and fore tibiæ ochreous-brown; middle and hind legs, and tarsi, white, with brown speckles.

Expanse $1\frac{7}{10}$ inch.

Family HYPENIDÆ.

Wings broad, delicate: forewing often with tufts of prominent scales. Antennæ straight, furnished with ciliæ or with pubescent scales; legs long; palpi compressed, generally long, alike in both sexes, porrect, and pilose.

Larva cylindrical, elongated, moniliform, having, generally, only three pair of

middle legs, the first pair being unfit for walking; head small and globular. Lives unconcealed. Pupa in a very slight shell.

Genus CORCOBARA.

Corcobara, Moore, Desc. Lep. Coll. Atk. p. 186 (1882).

Forewing very long, narrow; costa slightly arched at the base, from whence it is straight to the end; apex very acutely pointed; exterior margin short, upper half erect, concave, and angled outward at end of upper median vein, very oblique hindward; posterior margin broadly convex; cell extending two-thirds the wing; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell, bent upward and joined by a short spur to third near its base; discocellular bent at each end, very convex in middle, radials from the angles; middle median from close to end of the cell, lower at one-half before the end; submedian slightly curved near base: hindwing long, somewhat narrow; exterior margin very obliquely convex, and slightly angular in the middle; costal vein straight, extending to apex; cell nearly half the wing; two subcostals from end of the cell; discocellular concave, radial from near lower end; two upper medians from end of the cell, lower at one-third before the end; submedian and internal vein slightly curved. Body moderately stout, abdomen rather long; palpi very long, three-eighths of an inch in length, porrect, flat, very compactly squamose, second joint attenuating to anterior end and extending two-thirds its length beyond the head, third joint more than half length of second, truncate at tip; legs compactly clothed; antennæ very minutely bipectinated.

CORCOBARA ANGULIPENNIS (Plate 176, Fig. 3).

Corcobara angulipennis, Moore, Desc. Lep. Coll. Atk. p. 186, pl. vi. fig. 16 (1882).

Forewing purplish brownish-ochreous, washed with glaucous grey; crossed by numerous very indistinct, purplish-grey rather long slender strigæ; the costal and posterior borders sparsely black speckled; an ochreous reniform mark with a black dot at its upper and lower end: hindwing bright ochreous-yellow, with a large black subapical spot. Thorax, palpi, fore and middle legs in front purplish-brownish-ochreous, front of thorax ochreous; abdomen bright ochreous-yellow. Underside ochreous-yellow; both wings with a blackish subapical spot, and black speckles on costal border.

Expanse 2 to $2\frac{1}{8}$ inches.

CORCOBARA THWAITESI (Plate 176, Fig. 2, 2*a* ♂ ♀, 2*b* larva).

Forewing dark olivescent purplish-brown; crossed by indistinct pale bordered black, somewhat irregularly disposed strigæ; basal area below the cell, in male, yellow speckled, and with a short oblique yellowish speckled streak ascending from

middle of the posterior margin: hindwing yellow, with a black oval subapical spot. Thorax, head, palpi, and forelegs olivaceous-brown; middle and hindlegs ochreous; abdomen yellow, tipt with brown.

Expanse ♂ ♀ $1\frac{6}{10}$ inch.

Larva semilooped, elongated; with 16 legs, the two first middle pair aborted and unfit for walking; a slight conical dorsal hump on 12th segment; colour greyish-brown above, purplish-brown beneath; sides greyish-white and traversed by a longitudinal brown line; spiracles black; head ochreous-yellow, with a black spot in front; legs blackish.

Pupa elongated, narrow, purplish-red.

Genus ANORATHA.

Anoratha, Moore, Proc. Zool. Soc. (1867), p. 82.

Forewing long, narrow, triangular; apex acute, slightly falcate, exterior margin very oblique, slightly angular in the middle, posterior margin in male about half length of the anterior; cell extending beyond half the length; first subcostal emitted at three-fifths before end of the cell, second at one-eighth, trifid, fifth from end and slightly touching third near the base; discocellular inwardly oblique, recurved, bent close to upper end and below the middle, radials from the angles; middle median from close to end of the cell, lower at one-half; submedian much curved at the base: hindwing rather narrow, anterior margin extending beyond posterior margin of forewing; apex rounded, exterior margin angular in the middle; cell half the length, broad; two subcostals from end of the cell; discocellular inwardly oblique, slightly concave, radial from above the middle; two upper medians from beyond end of the cell, recurved upwards, lower median at about one-half and almost parallel with the upper; submedian and internal veins slightly recurved. Body slender; thorax and head laxly clothed, frontal tuft pilose; palpi porrect, long, compressed; second joint clothed above and beneath with short hairs, straight, slightly recurved in the female, ascending slightly upward and outward to level of the vertex and extending half its length beyond the frontal tuft, third joint about one-third the length of second, fusiform; antennæ in male setose, with a few longer very slender lashes; simple in the female; abdomen long, attenuated and extending half beyond the hindwing in male, and with a valvular pilose tuft at the apex; legs very long, slender, squamous; femora slightly fringed beneath; spurs long and slender.

Type, A. costalis.

ANORATHA PARITALIS (Plate 176, Fig. 7 ♂, 7*a* ♀).

Hypena paritalis, Walker, Catal. Lep. Het. B. M. xvi. p. 65 (1858).

Male. Forewing olivescent ochreous-brown, indistinctly flecked with short

transverse brown-speckled strigæ; a slender ochreous-white band extending along the costal border; a transverse postmedial inwardly-oblique brown line with pale outer border, beyond which is a submarginal series of white-centred brown dentate spots; a small white spot at upper and lower end of the cell: hindwing pale purplish cinereous-brown, the outer border being slightly ochreous. Cilia brown, alternated with ochreous spots. Thorax, head, palpi, and forelegs olivescent ochreous-brown; abdomen purplish cinereous-brown, the tip ochreous.

Female. Forewing olivescent brownish-ochreous; speckled with brown; the transverse postmedial line and submarginal spots as in male: hindwing and abdomen paler purplish cinereous-brown. Thorax, head, palpi and forelegs brighter brownish ochreous; palpi brown beneath.

Expanse, ♂ $1\frac{4}{10}$, ♀ $1\frac{6}{10}$ inch.

Genus DICHROMIA.

Dichromia, Guénee, Deltoides et Pyral. p. 18 (1854); Walker, Catal. Lep. Het. B. M. xvi. p. 13.
Calymma (part), Hübner, Verz. bek. Schmett, p. 281.

Forewing rather stout, moderately broad, elongated, exterior margin convex, slightly oblique; cell narrow, extending beyond half the length; first subcostal emitted at two-fourths before end of the cell, second at one-fourth, trifid, fifth from end and slightly touching third at some distance from the base; discocellular concave in middle, bent near each end, radials from the angles; middle median at one-eighth, lower at one-half; submedian slightly recurved: hindwing short, broad, apex rounded, exterior margin oblique, slightly convex; cell extending to half the length; two subcostals from end of the cell; discocellular outwardly oblique, concave, radial from below the middle; two upper medians from end of cell, lower at nearly one-half; submedian and internal vein straight. Body moderately stout; thorax laxly squamous; frontal tuft pilose; palpi porrect, long, broad, laxly squamous, compressed, second joint of equal breadth throughout, extending far beyond the head, third joint nearly half length of second, broad, terminated by an acute tip; antennæ with minute equal ciliæ and fine lashes in the male; legs stout, tibiæ villose in male, spurs long.

Type, D. orosialis.

DICHROMIA OROSIA (Plate 176, Fig. 1 ♂, 1*a* larva).

Phalæna Noctua Orosia, Cramer, Pap. Exot. iii. p. 149, pl. 275, fig. D (1782).
Calymma Orosia, Hübner, Verz. bek. Schmett, p. 281.
Dichromia orosialis, Guénee, Delt. et Pyr. p. 18; Walker, Catal. Lep. Het. B. M. xvi. p. 14.

Forewing purplish-cinereous, speckled with black scales; with a broad short blackish-brown medial costal triangular band: hindwing ochreous-yellow, with a broad blackish-brown marginal band, which tapers hindward, but does not reach

the anal angle. Thorax, head, fore and middle legs purplish-cinereous, black scaled; palpi black, slightly speckled with cinereous scales; hindlegs ochreous-yellow.

Expanse $1\frac{2}{10}$ to $1\frac{4}{10}$ inch.

Larva elongated; with 16 legs; pale green; head and hind part of the segments yellowish; with several rows of small black raised spots; head also with black spots; anterior legs black; middle and hindlegs olivaceous. Pupa thickish, reddish, with black bands.

DICHROMIA PULLATA (Plate 176, Fig. 4).

Forewing umber-brown, sparsely black speckled at the base; with a broad medial transverse quadrate patch of blackish brown extending to the submedian vein, the patch containing one white dot within the cell in the male, and two in the female; the inner border of the patch is outwardly curved, and the outer border margined by a wavy black line, which is continued to the posterior margin; outer area of the wing thickly speckled with greyish-white scales, which are most densely packed along the border of the patch, at the apex, and bordering the marginal row of black dentate spots; below the apex is a curved blackish-brown streak, above which are two black spots with white tips, the lower outer area also being traversed by two rows of blackish lunules with greyish-white borders: hindwing dusky brown, with the lower discal area white. Body, palpi, and legs dusky brown.

Expanse $1\frac{3}{10}$ to $1\frac{4}{10}$ inch.

Genus BOMOLOCHA.

Bomolocha, Hübner, Verz. bek. Schmett, p. 343 (1825-7); Stephens, Illust. Brit. Ent. Haust. iv. App. p. 416 (1835); Lederer, Noct. Eur. p. 214.

Differs from typical Hypena (*H. rostralis*). Forewing comparatively shorter, broader, and more triangular in shape; scales on orbicular and reniform marks not raised; first subcostal emitted at one-third before end of the cell, second at one-sixth, fifth from end and joined to third for a short distance near its base; middle median at one-tenth, lower at two-fifths: hindwing not so broad as in *H. rostralis*, the exterior margin being more regularly convex; cell nearly half the length, of moderate breath; two subcostals from end of the cell; two upper medians also from end of the cell. Thorax more robust, laxly clothed; abdomen with dorsal crests; head smaller; head and frontal tuft laxly clothed; palpi smaller, less robust, narrower, clothed with longer, slender, and more laxly disposed hairy scales; apical joint horizontal; femora fringed beneath; tibiæ compactly pilose; antennæ stouter, setose.

Type, B. crassalis.

BOMOLOCHA VESTITA (Plate 176, Fig. 10).

Hypena rhombalis, Walker, Catal. Lep. Het. B. M. xvi. p. 56 (1858) nec Guénee.

Forewing purplish-ferruginous, with a large ferruginous-black patch occupying

the upper basal two-thirds of the wing, the patch bordered by a slender white outer line; the outer border of the patch with a rounded projecting angle in the middle of the disc, the lower border ascending obliquely upwards to near base of the cell; across the disc is a submarginal series of indistinct black points with white speckled tips, and a subapical curved dentated black streak: hindwing and abdomen ferruginous-brown; tarsi with pale bands.

Expanse $1\frac{3}{10}$ inch.

Genus HYPENA.

Hypena, Schrank, Fauna Boica, ii. 2, p. 163 (1802); Hübner, Verz. bek. Schmett, p. 345; Treitschke, Schmett, Eur. vi. 2, p. 311.

Forewing rather short, somewhat narrow; costa arched from the base, apex acute, exterior margin slightly oblique and almost angular in the middle; orbicular and reniform spot composed of a small patch of raised scales; cell narrow, extending nearly two-thirds the length; first subcostal emitted at two-fifths before end of the cell, second at one-fourth, trifid, third from below second immediately above end of cell, fourth at more than half beyond base of third, fifth from end of cell and slightly touching third near its base; discocellular slightly concave in middle, bent near each end, radials from the angles; middle median from about one-twelfth, lower at one-third; submedian recurved: hindwing very broad, apex somewhat produced, exterior margin convex below the middle; cell very broad, extending half the length; costal and subcostal joined together to one-third length of the cell; two subcostals from end of the cell; discocellular slender, radial from below its middle; two upper medians on a footstalk at one-sixth beyond end of the cell, lower about one-third; submedian and internal vein straight. Body moderately stout; frontal tuft projecting beyond the head; palpi porrect, laxly clothed with strong coarse long scales, compressed, second joint extending its entire length beyond the head, third joint ascending, broad, one-fifth the length of second, pointed at the tip; a dorsal tuft at base of abdomen; antennæ minutely pectinated, with short slender lashes in male; setose in female; legs moderately slender, compactly clothed, spurs long.

Type, H. rostralis.

HYPENA MOLPUSALIS.

Hypena Molpusalis, Walker, Catal. Lep. Het. B. M. xix. p. 844 (1859).
Hypena subapicalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1137 (1865).
Hypena sparsalis, Walker, *id.* p. 1511.

Purplish greyish-brown: forewing blackish speckled; crossed by an irregular zigzag antemedial black speckled duplex line, and a postmedial line, the latter angulated outward beyond the cell and on the lower median vein; both lines with cinereous speckled border; a submarginal whitish speckled denticulated line, and a

marginal row of whitish bordered black lunules; orbicular and reniform mark punctiform, black: hindwing paler, with a blackish marginal line. Thorax, head, palpi, and legs purplish greyish-brown; abdomen and tarsi with pale cinereous bands.

Expanse 1 inch.

HYPENA JOCOSALIS.

Hypena jocosalis, Walker, Catal. Lep. Het. B. M. xvi. p. 57 (1858)

Forewing purplish cinereous-brown, speckled with darker brown scales; with a dark brown longitudinal fascia extending from base below the cell, widening across the disc, and curving upward to below the apex, the fascia crossed by an antemedial zigzag purplish-cinereous duplex line, and an inwardly oblique, postmedial interlined purplish-cinereous band, beyond which is a lower submarginal cinereous line; two dentate black subapical spots, and a marginal blackish line; a black orbicular dot and a pale reniform streak: hindwing and abdomen pale brown, with a blackish marginal line. Thorax, head, palpi, and forelegs purplish-cinereous, brown speckled.

Expanse $1\frac{1}{10}$ inch.

HYPENA COLOMBANA (Plate 176, Fig. 8).

Male. Purplish greyish-brown: forewing crossed by an antemedial pale bordered black line, which is acutely bent outward at the median vein, the upper end of the line indistinct; an inwardly oblique slightly waved discal black line with a parallel pale outer bordered line; lower half of the area between the lines dark brown; three submarginal waved brownish fasciæ, which are dilated into a curved subapical dark brown streak, above which are two white tipt black spots; marginal lunular line black: hindwing, and abdomen paler purplish greyish-brown.

Expanse $1\frac{2}{10}$ inch.

Near to *H. jocosalis*.

HYPENA BIANGULATA (Plate 176, Fig. 9).

Male. Purplish-brown: forewing crossed by an inwardly-oblique white-bordered black antemedial line ending on the median vein; a discal inwardly-oblique pale bordered black line, which is convexly angulated at end of the cell and above the submedian; the interspace between the lines dark brown, this colour being most intense immediately below the cell; a black dot in middle of the cell, and a slight reddish lunule at its end; at the apex are two white-tipt black spots, below which is a subapical curved dark brown pale-bordered streak, ending in two lower brown waved submarginal fasciæ; marginal lunular line brown: hindwing and abdomen paler purplish-brown.

Expanse $1\frac{4}{10}$ inch.

Nearest to *H. gonospilalis*.

HYPENA LÆSALIS (Plate 175, Fig. 10).

Hypena læsalis, Walker, Catal. Lep. Het. B. M. xvi. p. 62 (1858).

Purplish cinereous-brown: forewings with the basal area to the postmedial line dark brown, with iridescent green tints in some lights; antemedial line indistinct, undulated; postmedial line inwardly oblique, straight, black, whitish bordered externally; a recurved subapical slender white streak bordered beneath with dark brown; apical black spots dentate and white tipt; marginal pointed line with white tips; basal and middle cell spot black: hindwing, and body cinereous-brown.

Expanse $\frac{9}{10}$ inch.

"Colombo, January" (*Mackwood*).

HYPENA COGNATA (Plate 175, Fig. 8).

Allied to *H. læsalis.* Differs on the forewing in the postmedial white-bordered line being erect and bent outward at the end of the cell and at the lower median vein; the outer area of the wing is also paler and of a greyer tint of colour; the subapical white streak is deeply concave below the black dentate spots; the dark-brown colour bordering the lower side of the subapical streak does not extend down the submarginal area.

Expanse $\frac{8}{10}$ inch.

HYPENA LACERATALIS (Plate 176, Fig. 5 ♂, 5*a* ♀).

Hypena laceratalis, Walker, Catal. Lep. Het. B. M. xvi. p. 60 (1858) ♀.
Hypena comptalis, Walker, MS. Coll. B. M. ♀.

Male. Forewing dark brown, speckled with greyish-white and black scales; crossed by an antemedial black angulated line, and a more distinct postmedial line, the latter bordered externally by greyish-white scales; a curved greyish-white speckled streak from the apex, above which are two white bordered black dentate spots; some costal white dots also before the apex; a blackish lunular marginal line with white inner border; the lower submarginal area traversed by greyish-white scaled sinuous fasciæ; a black spot at base of the cell and another spot in its middle: hindwing, and abdomen dark brown. Thorax, head, palpi, and forelegs speckled with greyish-white scales; tarsi with pale bands.

Female. Forewing of an ochreous-brown tint, sparsely speckled with black and grey scales, the basal area obliquely paler ochreous, and crossed by the brown speckled antemedial angulated line, the upper medial area being dark brown; postmedial line and markings on outer border more prominent than in male, and the cell spots more distinct.

Expanse, ♂ $1\frac{2}{10}$, ♀ $\frac{9}{10}$ to $1\frac{1}{10}$ inch.

HYPENA LABATALIS (Plate 176, Fig. 6).

Hypena labatalis, Walker, Catal. Lep. Het. B. M. xvi. p. 66 (1858).

Cinereous-brown: forewing slightly speckled with black, and with a slight purplish tinge; posterior border broadly pale brownish-ochreous, the medial area from the costal to submedian vein occupied by a broad oblique quadrate blackish-bordered dark brown band; a prominent curved whitish streak from the apex, above which are white-bordered black spots; cell spots black; marginal lunules blackish, pale bordered: hindwing and abdomen cinereous-brown. Thorax, head, and palpi dark brown.

Expanse $\frac{9}{10}$ inch.

HYPENA QUÆSITALIS.

Hypena quæsitalis, Walker, Catal. Lep. Het. B. M. xvi. p. 58 (1858).

Forewing dark ferruginous-brown, the basal area speckled with metallic green scales; crossed by an outwardly-oblique antemedial white-bordered black line, which ends on the submedian vein; an erect undulated postmedial white-bordered black line, which is outwardly bordered by diffused wavy lilacine fasciæ; followed by a submarginal pale line, which is denticulated with white at its costal end, and outwardly bordered below the apex with white speckles; marginal line brown, bordered with white: hindwing paler brown, with a dark brown marginal line, which has a short white inner streak on its middle; cilia pale below the apex and before the anal angle. Thorax, head, and palpi dark ferruginous-brown; tarsi with pale bands; abdominal crests very dark brown.

Expanse $1\frac{1}{10}$ inch.

HYPENA ICONICALIS (Plate 175, Fig. 9).

Hypena iconicalis, Walker, Catal. Lep. Het. B. M. xvi. p. 61 (1858).

Dark purplish ferruginous-brown, with an opaline hue in some lights; the basal half darkest coloured in the male, the division being defined by a more or less distinct whitish-speckled line, which is almost straight and erect; also crossed by an indistinct antemedial brown angulated line; a small black spot at base of the cell, and in the male another spot in middle of the cell, the latter being outwardly tipt with white; outer half of the wing sparsely black scaled; with a submarginal series of white-tipt black dentate spots; some white points on the costa before the apex: hindwing duller coloured; marginal line dark brown. Thorax dark ferruginous-brown, opalescent; head and palpi hoary.

Expanse 1 to $1\frac{1}{8}$ inch.

HYPENA MANDATALIS.

Hypena mandatalis, Walker, Catal. Lep. Het. B. M. xvi. p. 58 (1858).

Forewing pale purplish greyish-brown, glossy, speckled with dark brown scales; basal half dark purplish-brown, the division across the middle being by a slender

biangulated white line; a transverse pale antemedial line, which is bent inward from the subcostal, and is suffusedly bordered on its lower outer side by olive-green; a submarginal row of dark brown points with white tips, and a dark brown speckled streak below the apex; a marginal row of minute black points; a white-tipt black orbicular spot, and a black lunate reniform mark: hindwing and abdomen pale brown. Thorax, head, palpi, and forelegs, and dorsal tufts on abdomen, dark purplish-brown; tarsi with pale bands.

Expanse 1 inch.

HYPENA LIGNEALIS.

Hypena lignealis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1138 (1865).

Forewing brownish-ochreous, sparsely speckled with brown; crossed by a short outwardly-oblique antemedial pale streak, and an inwardly-oblique postmedial streak; the basal, medial, and subapical area speckled with dark brown; a black orbicular spot; marginal points black: hindwing and abdomen cinereous-brown. Thorax, head, palpi, and forelegs brownish-ochreous.

Expanse $1\frac{1}{10}$ inch.

HYPENA SURREPTALIS.

Hypena surreptalis, Walker, Catal. Lep. Het. B. M. xvi. p. 84 (1858).

"Female. Cinereous: forewings subfalcate, moderately broad, speckled with black; interior line very indistinct; exterior line brown, straight, oblique, broad, with a pale outer border; submarginal line indistinct, shortened in front by a deep black almost-divided subapical streak, in front of which is a little whitish line; marginal lunules black; orbicular mark forming a brown dot: hindwings without markings. Thorax speckled with black. Abdomen and hindwings somewhat paler.

"Expanse 12 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HYPENA DETERSALIS.

Hypena detersalis, Walker, Catal. Lep. Het. B. M. xvi. p. 232 (1858).

"Male. Testaceous-cinereous: wings partly and slightly tinged with fawn colour; lines pale, partly bordered with brown; interior line straight, oblique; exterior line undulating; submarginal line denticulated, accompanied by some black points; marginal points black. Forewing with a large pale-bordered reniform mark. Palpi with a black band near the tip.

"Expanse 7 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HYPENA INEFFECTALIS.

Hypena ineffectalis, Walker, Catal. Lep. Het. B. M. xvi. p. 85 (1858).

Brownish-cinereous: forewing subfalcate; transverse lines brown, denticulated,

indistinct; orbicular mark black, punctiform; marginal lunules brown: hindwing with a brownish band and a discal mark.

Expanse $\frac{6}{10}$ inch.

HYPENA STIPATA.

Nanaguna stipata, Walker, Catal. Lep. Het. B. M. xxvii. p. 85 (1863).

Cinereous-brown: forewing partly pale cinereous, thinly black speckled; with an outwardly-oblique antemedial interlined brown streak from the costa to below end of the cell, which is traversed by two longitudinal pale fawn-coloured parallel lines, which extend from the base to the disc, and are there bent forward, the inner line bordering the outer side of a triangular black mark at end of the cell; a submarginal series of cinereous-bordered blackish points, and a marginal row of lunules: hindwing and abdomen cinereous-brown. Tarsi with brown bands.

Expanse $\frac{9}{10}$ inch.

Genus MARAPANA.

Forewing elongated, rather broad; apex acute, exterior margin slightly oblique and convex; cell extending half the length; first subcostal emitted at two-fifths before end of the cell, second at one-sixth, trifid, fifth from end and joined by a short spur to third at its base; discocellular concave in the middle, bent near each end, radials from the angles; middle median at one-ninth, lower at one-third; submedian curved at the base: hindwing rather long and narrow, quadrate; exterior margin oblique, abruptly angled at lower median; abdominal margin very short; cell extending two-fifths the length; two subcostals from end of cell; discocellular outwardly oblique, radial from below the middle; two upper medians from end of cell, lower at one-third; submedian and internal vein straight, very short. Body moderately stout, smooth; palpi porrect, much longer than the thorax, compressed, clothed with long coarse spatular hairy scales above, the scales longest at the base, compactly scaled beneath; third joint ascending, one-third length of the second, clothed with similar coarse spatular hairy scales above and beneath, and pointed at the tip; antennæ slender, with fine short lashes; legs long, slender, squamous, spurs slender, fore tibiæ swollen, pilose beneath.

Type, M. raralis.

MARAPANA RARALIS.

Hypena raralis, Walker, Catal. Lep. Het. B. M. xvi. p. 65 (1858).

Pale ochreous-red: both wings minutely speckled with black scales; with an inwardly-oblique transverse discal straight brown line, which is pale bordered on its inner side; a submarginal zigzag pale fascia formed by the absence of the black scales; a marginal row of black dots; a black dot also in middle of the cell in forewing. Thorax, head, and abdomen not speckled with black scales; palpi dark

brown, speckled with red scales; femora and tibiæ reddish; fore and middle tarsi dark brown.

Expanse $1\frac{4}{10}$ inch.

MARAPANA INCONGRUALIS (Plate 177, Fig. 5).

Hypena incongrualis, Walker, Catal. Lep. Het. B. M. xvi. p. 232 (1858).

Forewing dull yellowish-ochreous, sparsely speckled with minute red scales; crossed by an antemedial, medial, and a postmedial denticulated red-speckled line, each ending on the costa in a short black streak; a submarginal and marginal row of distinct black points; cilia also slightly spotted with black and red scales; a blackish dot at base of the cell, and two larger spots at end of the cell: hindwing dusky brown, speckled with ochreous at the base; a short subanal streak, and the outer border and cilia ochreous, with some marginal black points along the middle. Body, palpi, and legs yellowish-ochreous; abdomen speckled with dusky brown scales above; legs with reddish-brown scales; tarsi blackish above and with pale bands.

Expanse 1 inch.

Genus OPHIUCHE.

Ophiuche, Hübner, Verz. bek. Schmett. p. 344 (1825-27).

Wings short: forewing triangular; apex almost subfalcate; cell narrow, extending nearly three-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end and slightly touching third near its base; discocellular very slender, bent near the ends, radials from the angles; middle median at one-ninth before end of cell, lower at four-ninths; submedian curved: hindwing rather broad, exterior margin convex; cell fully half the length; two subcostals from end of cell; discocellular outwardly oblique, bent below the middle, radial from the angle; two upper medians from end of cell, lower at one-third. Body moderately slender; abdomen keeled above; head very pilose in front; palpi porrect, compressed, laxly squamose, projecting three-fourths beyond the head, of nearly equal breadth throughout; third joint one-third length of second, obliquely ascending, acutely pointed at tip; antennæ crenulated, finely bipectinated to tip; legs slender, tibiæ laxly squamose, spurs long.

Type, O. lividalis.

OPHIUCHE CONSCITALIS (Plate 175, Fig. 4).

Hypena conscitalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1509 (1865).
Hypena perna, Felder et Rogenh. Nov. Voy. Lep. iv. pl 120, fig. 8 (1874).

Forewing purplish-cinereous, with the basal area below the subcostal vein obliquely across the disc to the costa before the apex brownish-ochreous, the subcostal edge of which is defined by a whitish line and two equidistant black dots, the

oblique discal edge being defined by a slightly curved white-bordered black line; outer border of the wing traversed by two whitish-speckled lunular fasciæ, the outer fascia with indistinct black-speckled points; marginal and intercilial line brown: hindwing duller brownish-cinereous; cilia cinereous-white. Body brownish-cinereous; palpi hoary.

Expanse $\frac{9}{10}$ to 1 inch.

OPHIUCHE MISTACALIS (Plate 175, Fig. 6, ♀).

Herminia mistacalis, Guénee, Deltoides et Pyralites, p. 60 (1854).
Hypena pactalis, Walker, Catal. Lep. Het. B. M. xvi. p. 64 (1858).

Forewing pale cinereous, speckled with brown; crossed by four equidistant, outwardly-oblique, indistinct, pale-bordered brown lines, the three inner lines slightly bent inward at the costal ends, the outer line straight, diffused, extending to apical angle, and bordered on its outside by a parallel slender brown line: hindwing and body pale cinereous-brown; marginal line dusky brown. Thorax and palpi speckled with cinereous.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

OPHIUCHE OBACERALIS (Plate 175, Fig. 5, ♂).

Hypena obaceralis, Walker, Catal. Lep. Het. B. M. xvi. p. 53 (1858).
? *Hypena obliqualis*, Kollar, Hugéls Kaschmir, iv. p. 491 (1844).

Cinereous-brown: forewing indistinctly flecked with minute darker brown strigæ; crossed by a slender brown angulated erect antemedial line, and a whitish-bordered brown inwardly-oblique almost straight discal line; a black orbicular spot; a few white-bordered black scales linearly disposed below the cell, and a more or less defined submarginal macular series of black and white scales: hindwing, body, and palpi duller cinereous-brown; tarsi with pale bands.

Expanse, ♂ 1, ♀ $\frac{9}{10}$ inch.

"Common at Colomba" (*Mackwood*).

Genus NOLASENA.

Nolasena, Walker, Catal. Lep. Het. B. M. xii. p. 981 (1857).

Male. Forewing rather short, somewhat broad, almost straight in front, exterior margin hardly oblique, slightly uneven; cell two-fifths the length; first subcostal one-third before end of the cell, second at one-sixth, trifid, fifth from end of the cell and slightly touching third near its base; discocellular concave, bent very close to each end, radials from the angles; middle median about one-sixth, lower nearly one-half; submedian curved from the base: hindwing short, exterior margin convex, slightly uneven; cell one-half the length; two subcostals from end of the cell;

discocellular very slender, concave, radial from near lower end; two upper medians from end of cell, lower at one-third; submedian and internal vein straight. Body stout; palpi stout, obliquely ascending, compressed, second joint laxly squamose in front, third joint smooth, lanceolate, half-length of second; antennæ minutely ciliated; legs stout, smooth; femora rather broad; fore tibiæ short, middle tibiæ slightly pilose, hind tibiæ thick, spurs very long.

NOLASENA FERRIFERVENS (PLATE 177, FIG. 9, ♀).

Nolasena ferrifervens, Walker, Catal. Lep. Het. B. M. xii. p. 982 (1857).

Cinereous ochreous-brown: forewing with three transverse outwardly-oblique crimson bands; the outer band undulated, and bordered externally by a parallel slender black and white line and a shining glaucous waved band; a similar glaucous band also between the two inner crimson bands; a row of indistinct short crimson marginal streaks between the veins, and a marginal crimson lunular line; some white costal points before the apex: hindwing and body cinereous ochreous-brown. Palpi and legs brownish-ochreous.

Expanse ♂ ♀ $\frac{8}{10}$ inch.

Family HERMINIIDÆ.

Forewing stout, pulverose: hindwing with variable markings, but always with some traces of the lines of the forewing; antennæ pubescent, with longer ciliæ on each joint, exteriorly often curled, or tumid, or furnished with a tuft of hairs or scales; fore tibiæ often tumid and furnished with brushes of silky hairs, or with bunches of woolly or scaly hairs; palpi variable, generally curved upward, differing according to sex; third joint in the male frequently very long and tufted and bent backward over the thorax.

Larva short and thick; with 16 feet. Lives more or less concealed. Pupa in a variable shell.

Genus HERMINIA.

Herminia, Latreille, Hist. Nat. Gen. Crust. et Ins. iii. p. 413 (1802); *id.* xiv. p. 227 (1805); St. Farg. et Serv. Enc. Meth. x. p. 680 (1825).

Polypogon,* Schrank, Fauna Boica, ii. 2, p. 161 (1802).

Pogonitis, Sodoffsky, Bull. Soc. Imp. Mosc. pt. vi. p. 18 (1837).

Pechipogon, Hübner, Verz. bek. Schmett. p. 344 (1825-27).

Male. Forewing elongated, rather broad; costa slightly arched, apex acute, exterior margin oblique, hardly convex in the middle; cell extending nearly three-fifths the length; first subcostal emitted at one-third before end of the cell, second

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* Previously used in Botany.

from very close to the end, trifid, third at half-length from base of second, and fourth at half from base of third, fifth from end of cell and slightly touching second at half-way between its base and third; discocellular very concave in the middle, bent near each end, radials from the angles; middle median from close to end of cell, lower at two-fifths; submedian slightly recurved: hindwing rather long, quadrate, exterior margin oblique and convexly angular in the middle; cell extending half the length, broad; two subcostals on a footstalk at about one-third beyond the cell; discocellular bent inward above the middle, radial from near lower end; two upper medians from a footstalk one-fifth beyond the cell, lower at about one-third before end of the cell; submedian and internal vein straight. Body rather slender; palpi obliquely ascending, compressed, clothed above and beneath with rather long lax stout hairy scales; second joint very long, third joint about one-third the length of second and pointed at its tip; antennæ bipectinated, the branches stout at the base and ciliated, shaft very slightly swollen on its inner side towards the middle; legs long, squamous; fore femora tufted at the knee; fore tibiæ thickened, laxly squamous; fore tarsi exposed.

Type, H. ventilabris, Latr. (*barbalis*, Clerck).

HERMINIA TIMONALIS.

Herminia Timonalis, Walker, Catal. Lep. Het. B. M. xvi. p. 239 (1858).

"Male. Fawn colour. Wings with a whitish straight oblique submarginal line, which is diffusedly bordered with brown on the inner side; marginal lunules brown. Forewings with the basal, interior, and exterior lines blackish, undulating; reniform mark represented by a black spot: hindwings cinereous, with a brown discal mark and an exterior brown line. Abdomen cinereous; palpi long, reverted over the head and fore part of thorax, slightly fringed; second joint slightly curved; third straight, lanceolate, rather more than half-length of second, with which it forms an angle; antennæ setose, nodose before the middle, curved from thence to tip; forelegs densely tufted about the knees.

"Expanse 13 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HERMINIA DIFFUSALIS.

Herminia diffusalis, Walker, Catal. Lep. Het. B. M. xvi. p. 239 (1858).

"Male. Fawn colour. Forewings with the lines brown, denticulated; a brown straight middle band; submarginal line diffuse on the inner side; marginal points black; reniform mark brown, narrow, pale bordered: hindwings-brownish cinereous, with three brown lines and brown marginal lunules. Palpi long, reverted over the head and forepart of thorax; second joint pubescent, much curved; third lanceolate,

straight, shorter than the second; antennæ beset with curved setæ; abdomen slightly compressed at the tip; fore tibiæ much dilated.

"Expanse 9 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus ÆTHIA.

Æthia, Hübner, Verz. bek. Schmett. p. 339 (1825-27); Stephens, Illust. Brit. Ent. Haust. iv. p. 17 (1834).

Sophronia,* Duponchel, Catal. Lep. Eur. p. 211 (1846); Guénee, Delt. et Pyral. p. 49 (1854); Walker, Catal. Lep. Het. B. M. xvi. p. 93; Heinemann, Schmett. Deutsch. i. p. 603 (1859).

Zanclognatha (part), Lederer, Noct. Eur. p. 211.

Forewing elongate, triangular, rather broad, exterior margin convexly angular in the middle; cell broad, extending to half the length; first subcostal emitted at one-half before end of the cell, second at one-eight, trifid, fifth from end of the cell and joined to third by a short spur near its base; discocellular concave in the middle, bent near each end, radials from the angles; middle median at one-sixth before end of the cell, lower at two-fifths; submedian slightly curved: hindwing short, broad, exterior margin obliquely convex; cell nearly half the length; two subcostals from end of the cell; discocellular bent in the middle, radial from below the angle; two upper medians from end of cell, lower at two-fifths; submedian and internal vein slightly curved. Body moderately stout, squamous; palpi obliquely ascending, slightly curved, moderately long; second joint squamous, almost linear; third joint linear, half-length of the second; antennæ crenulated, with short fine ciliæ; legs rather slender, squamous, spurs long.

Type, Æ. emortualis.

ÆTHIA ALBICOSTA.

Female. Ochreous-brown: forewing with a slender white line extending along the costal edge; a very indistinct transverse antemedial diffused brown line, and a postmedial pale-bordered brown line, both lines starting from the subcostal vein; a marginal row of black dots, and a black spot at end of the cell: hindwing with a similar transverse antemedial and postmedial line, marginal row of black dots, and a pale spot at end of the cell. Body ochreous-brown; head, palpi, and forelegs darker brown.

Expanse $1\frac{1}{8}$ inch.

Genus NODARIA.

Nodaria, Guénee, Delt. et Pyral. p. 63 (1854); Lederer, Noct. Eur. p. 211 (1857); Walker, Catal. Lep. Het. B. M. xvi. p. 116.

Forewing elongated, narrow; cell extending to more than half the length; first

* Previously used by Hübner for a genus of Lepidoptera.

subcostal emitted at nearly one-half before end of the cell, second from close to the end, trifid, fifth from end of the cell and slightly touching the third close to its base; discocellular concave in middle, bent near the ends, radials from the angles; middle median from close to end of the cell, lower at one-third; submedian curved: hindwing rather broad, convex externally; cell nearly half the length; two subcostals from end of the cell; discocellular concave, radial from lower end; two upper medians from end of the cell, lower at two-fifths; submedian and internal vein straight. Body moderately stout; abdomen smooth; palpi much curved, smoothly squamose, second joint ascending to level of vertex, third joint nearly as long as the second, lanceolate, very acute at the tip, its upper edge with a few fine hairs; antennæ of male increasing in thickness from the base to near the middle, where it is incrassated and bent, thence to the tip slender, pubescent, and with two bristles on each joint, the incrassated portion being also slightly tufted above; antennæ simple in female; legs stout, fore tibiæ in male robust, villose, tufted; fore tarsi short; middle and hind legs laxly squamose, spurs long.

NODARIA CINGALA.

Male. Forewing dark violaceous greyish-brown; crossed by an indistinct black zigzag antemedial line and a recurved postmedial denticulated line, followed by a submarginal denticulated line with greyish-white points; an indistinct black reniform mark: hindwing pale brownish-white, with faint traces of a transverse brownish discal fascia and marginal border. Thorax, head, palpi, antennæ, and legs dark greyish-brown; abdomen paler; a radiating tuft of ochreous-white hairs on fore tibiæ.

Expanse $\frac{7}{8}$ inch.

A smaller insect than *N. externalis.* Differs also in its shorter forewing, and in the colour of the hindwing.

Genus AGINNA.

Aginna, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1022 (1865), ♂.

Forewing elongated, moderately broad; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second immediately before end of the cell, trifid, fifth from end of the cell, free; discocellular extremely slender, concave, radials from the ends; middle median from near end of the cell, lower at two-fifths; submedian recurved from the base: hindwing rather broad, costa somewhat long, exterior margin slightly angular beyond the middle; two subcostals from end of the cell; discocellular extremely slender, radial from lower end; two upper medians from end of cell, lower at two-fifths before the end; submedian and internal vein wide apart. Body moderately stout, anal tuft compressed; palpi curved upward

over the head, compressed, squamose, slightly pilose on its upper edge, second joint reaching level of the vertex, broadest at its lower end, third joint lanceolate, two-thirds the length of second; antennæ in male setose, pubescent, incrassated and slightly tufted at one-third its length; legs stout; forelegs and middle femora laxly fringed, fore tibiæ densely clothed with short adpressed hairs; middle and hind tibiæ laxly pilose, spurs long, slender.

Type, A. circumscripta.

AGINNA ROBUSTALIS (Plate 177, Fig 1, 1*a*, ♂, ♀).

Herminia robustalis, Guénee, Deltoides et Pyralites, p. 58 (1854) ♂.
Bocana turpatalis, Walker, Catal. Lep. Het. B. M. xvi. p. 174 (1858), ♂, ♀.

Male and female. Pale ochreous-brown, brightest at the base in the male: forewing with a very indistinct transverse slightly-waved antemedial blackish line, and a recurved postmedial denticulated blackish line, followed by a brownish inner-bordered pale ochreous-white nearly straight oblique submarginal line, and a marginal row of blackish points; a blackish reniform mark at end of the cell: hindwing with faint traces of a paler discal line; a submarginal brownish-bordered ochreous-white line, which is slightly angular near each end, the lower angle almost touching the exterior margin; marginal points indistinct. Antennæ, palpi, and forelegs dark brown.

Expanse, ♂ $1\frac{3}{4}$, ♀ $1\frac{4}{10}$ inch.

Genus NABARTHA.

Closely allied to *Aginna*. Male: forewing comparatively longer and narrower, apex rounded, the exterior margin more oblique and not convex; venation similar, except that in the forewing the second subcostal is emitted at one-sixth before end of the cell, and the fifth touching the third at its base; two upper medians from end of the cell: hindwings more quadrate in shape, the exterior margin being straighter and more oblique below the apex, and the lower angle more prominent. Palpi somewhat larger, more slender; legs longer, less pilose; tarsi also longer; antennæ minutely ciliated in male, setose in female.

Type, N. Schaldusalis (*Bocana Schaldusalis*, Walker).

NABARTHA MARGINATA (Plate 177, Fig. 2).

Male and female. Pale violaceous ochreous-brown: forewing with a very indistinct brown-speckled zigzag transverse antemedial and postmedial line, and a submarginal broad violaceous-brown fascia; the outer edge of the fascia is obliquely straight and sharply defined; the outer margin of the wing being pale greyish-ochreous; a small brown spot at end of the cell: hindwing with a similar violaceous-brown submarginal fascia, and pale outer margin; the fascia angulated below the

middle, and thence extending close along the margin to anal angle; there is also faint traces of a slender brown discal line and a lunate streak at end of the cell. Cilia of both wings pale greyish-ochreous. Body, palpi, and legs violaceous ochreous-brown.

Expanse $1\frac{5}{10}$ inch.

Genus HIPOEPA.

Hipoepa, Walker, Catal. Lep. Het. B M. xvi. p. 188 (1858).

Wings moderately small: forewing elongated, apex pointed, exterior margin angular in the middle; cell extending to half the length; first subcostal emitted at one-half before end of the cell, second from close to end, trifid, fifth from end of the cell, free; discocellular slender, concave in the middle, radials from near the ends; middle median from close to end of cell, lower at nearly one-half; submedian curved from the base: hindwing rather short, broad; exterior margin convexly angular in the middle; cell one-half the length; two subcostals from end of cell; discocellular very slender; two upper medians from end of cell, lower at one-third. Body stout; palpi stout, compressed, laxly squamose, curved upward, third joint lanceolate, nearly as long as the second, slightly pilose on its upper edge; antennæ ciliated with fine slender lashes in male, setose in female; legs stout, fore tibiæ and tarsi in male densely and compactly clothed above, fore tibiæ also laxly tufted beneath.

HIPOEPA LAPSALIS (Plate 177, Fig. 6, ♀).

Hipoepa lapsalis, Walker, Catal. Lep. Het. B. M. xvi. p. 188 (1858).

Male and female. Purplish-brown: forewing crossed by an inwardly-oblique ill-defined darker brown undulated basal line, an antemedial, and a postmedial line; followed by a more prominent submarginal line, the latter being angulated outward in the middle and outwardly bordered by a slender ochreous-white line; between the middle lines is a diffuse darker brown fascia: hindwing paler brown, with an indistinct brown discal line, and a submarginal slender ochreous-white line, the latter being angulated in the middle. Body, palpi, and legs purplish-brown, tuft on forelegs cinereous.

Expanse $\frac{9}{10}$ inch.

HYPOEPA FRACTALIS.

Herminia fractalis, Guénee, Deltoides et Pyral. p. 60 (1854).
Bertula raptalis, Walker, Catal. Lep. Het. B. M. xvi. p. 164 (1858), ♂.

Male. Cinereous ochreous-brown: forewing with a transverse subbasal, antemedial, and a postmedial denticulated brown line, followed by a biangulated submarginal line bordered by a pale cinereous outer line; marginal points brown; between the middle lines is an inwardly-oblique diffused brown straight fascia: hindwing paler cinereous-brown, with an indistinct brown mark at end of the cell, and two discal lines, the outer line being bent and pale bordered near the anal angle.

Abdomen with two apical tufts, one dorsal, the other ventral; fore tibiæ brown, with a dense pale tuft beneath; middle and hind legs brown speckled.

Expanse $\frac{9}{10}$ inch.

Genus HADENNIA.

Forewing elongated, triangular; apex almost subfalcate, exterior margin oblique, convex hindward; cell extending half the length; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, fifth from end and joined by a short spur to third at one-fifth beyond its base; discocellular concave, bent near each end, radials from the angles; middle median at one-eighth, lower at two-fifths; submedian slightly curved: hindwing short, exterior margin very convex; cell two-fifths the length; two subcostals from end of cell; discocellular slightly concave, radial from lower end; middle median at one-eighth, lower at one-half. Body moderately stout; palpi much curved upward, compressed, second joint long, reaching half its length above the head, subfusiform, laxly squamose, third joint acicular, nearly half-length of second, laxly squamose, tufted above, point very acute; antennæ minutely setose; legs moderately stout, laxly squamose; spurs long.

Type, H. hypenalis.

HADENNIA HYPENALIS.

Bocana hypenalis, Walker, Catal. Lep. Het. B. M. xvi. p. 174 (1858).

Ferruginous greyish-brown. Both wings crossed by a dark brown inwardly-oblique curved subbasal line, a denticulated discal line, and a pale denticulated submarginal line, beyond which is a brown marginal lunular line; across the middle also is an oblique straight dark ferruginous-brown band, and bordering the submarginal line is a diffused dark ferruginous-brown fascia. Forewing also with a punctiform black orbicular spot, and a white reniform mark bordered with black: hindwing also with a smaller and less defined white spot at end of the cell. Tarsi dark brown.

Expanse $1\frac{2}{10}$ inch.

HADENNIA MYSALIS.

Bertula mysalis, Walker, Catal. Lep. Het. B. M. xix. p. 886 (1859).

Violaceous-brown, somewhat glossy. Both wings with an inwardly-oblique darker brown medial fascia, and a more diffused discal fascia. Forewing with a white lunule at end of the cell. Underside of both wings with a white lunule at end of the cell. Body, head, palpi, and legs violaceous-brown.

Expanse 1 inch.

HADENNIA JUTALIS.

Bocana jutalis, Walker, Catal. Lep. Het. B. M. xvi. p. 172 (1858).

Purplish-brown: forewing crossed by a very indistinct darker brown antemedial and a medial inwardly-oblique undulated line, a submarginal more distinct diffused denticulated line with pale ochreous points; a distinct black orbicular spot, and a large whitish-ochreous reniform mark with black border: hindwing with a similar

indistinct subbasal line, and a submarginal denticulated line with pale ochreous points; a pale spot also at end of the cell. Tips of hind femora, of each tibia, tarsal joints, and tip of palpi with pale ochreous bands.

Expanse $1\frac{1}{4}$ inch.

HADENNIA PRUNOSA (Plate 177, Fig. 8).

Dark purplish-brown: forewing crossed by an inwardly-oblique slender subbasal, a broad medial, and a discal recurved blackish fascia, the latter outwardly bordered by ochreous speckles; a similar short black fascia also extends from the latter to the apex; a marginal row of ochreous dots; a prominent ochreous-white orbicular dot and a reniform spot: hindwing with a similar black medial and discal fascia, and marginal ochreous dots. Body, palpi, and legs dark purplish-brown.

Expanse $1\frac{2}{10}$ inch.

Genus HYDRILLODES.

Hydrillodes, Guénee, Deltoides et Pyralites, p. 65 (1854); Walker, Catal. Lep. Het. B. M. xvi. p. 118.

Forewing elongated, narrow; exterior margin very slightly oblique and convex; cell short, extending to two-fifths the length; first subcostal emitted from close to end of the cell, second from the end, quadrifid; discocellular extremely slender, slightly concave; upper radial from upper end, lower radial and the two upper medians on a footstalk beyond lower end of the cell, lower median from close to end of the cell; submedian recurved: hindwing rather broad, exterior margin oblique, convex in the middle; cell extending nearly half the length; two subcostals on a footstalk one-third beyond the cell; discocellular extremely slender, concave, radial from close to lower end; two upper medians on a footstalk one-fifth beyond the cell, lower at one-third before the end; submedian and internal vein straight. Body moderately stout, smooth; palpi curved upward over the head; second joint ensiform, very laxly squamose in front, reaching above the vertex, third joint half-length of the second, acicular; antennæ serrated and finely ciliated in male, setose in female; legs long, squamose, fore tibiæ not tufted, hind spurs very long.

Type, H. lentalis.

HYDRILLODES LENTALIS (Plate 177, Fig. 11).

Hydrillodes lentalis, Guénee, Delt. et Pyr. p. 66, pl. 5, f. 3 (1854); Walker, Catal. Lep. Het. B. M. xvi. p. 118.

Catada captiosalis, Walker, Catal. Lep. Het. B. M. xvi. p. 210 (1858), ♂.

Male and female. Forewing dull ochreous-brown, the basal area brighter ochreous in some specimens; with a transverse very indistinct pale-bordered brown basal, antemedial, and a postmedial line, followed by a submarginal ochreous denticulated line, and a marginal row of blackish points; a dark brown lunate mark at end of the cell: hindwing cinereous-brown, with traces of a darker lunate mark at

end of the cell, and two transverse discal fasciæ. Body, palpi, and legs dark ochreous-brown; legs with pale bands.

Expanse $\frac{8}{10}$ to 1 inch.

HYDRILLODES GRAVATALIS (Plate 177, Fig. 12).

Bocana gravatalis, Walker, Catal. Lep. Het. B. M. xvi. p. 175 (1858).
Echana Tennentii, Felder et Rogenh. Nov. Voy. Lep. v. pl. 120, fig. 1 (1874), ♂.

Male and female. Purplish-brown: forewing with a transverse indistinct pale ochreous subbasal and an antemedial line, and a prominent pale ochreous postmedial line, the latter being dilated from the lower median vein and forming a broad patch to the costa, its inner edge joining a black lunate streak at end of the cell; a distinct pale submarginal denticulated line, and a marginal row of black points: hindwing paler; with traces of a darker streak at end of the cell, and transverse discal fasciæ. Body, palpi, and legs purplish-brown; legs with prominent pale bands.

Expanse $\frac{9}{10}$ to 1 inch.

Genus HELIA.

Helia, Guénee, Duponchell's Catal. Méth. Lép. Eur. p. 214 (1844); Guénee, Delt. et Pyral. p. 75.
Epizeuxis (part), Hübner, Verz. bek. Schmett. p. 346.

Forewing rather long and narrow; cell three-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-seventh, trifid, fifth from end and slightly touching third close to its base; discocellular concave, radials from near each end; middle median at one-eighth, lower at one-half; submedian recurved from the base: hindwing rather broad; cell half the length; subcostals from the end; discocellular concave, radial from near lower end; two upper medians from end, lower about one-half. Body laxly squamous; palpi long, narrow, compressed, curved upward, second joint reaching above vertex, third joint half length of second, slender, acute at tip; antennæ pectinated to tip, the branches ciliated; legs squamous; fore tibiæ short, stout, middle and hind legs long, spurs long and slender.

Type, H. Calvarialis.

HELIA LUNIFERA.

Female. Ochreous-white: forewing crossed by a basal, an outwardly-curved antemedial, and a waved postmedial brown band, each with blackish-speckled borders; followed by a prominent submarginal series of white-bordered black dentate spots, and a marginal lunular line; the area between the middle bands and also between outer band and exterior margin ochreous-brown; a prominent white lunular spot at end of the cell: hindwing ochreous-brown, with two pale-bordered blackish-speckled angular lines from the anal angle; marginal lunular line brown.

Abdomen brown at the tip; palpi and legs brown.

Expanse 1 inch.

HELIA FIGURATA.

Male. Forewing greyish ochreous-white; crossed by a basal, antemedial, post-medial, and a submarginal black-speckled band, each band dilated at the costal end, the two inner bands also partially broken in crossing the cell, the middle band extending broadly and longitudinally across the end of the cell and there enclosing a whitish lunule, below which the band is slender and sinuous; the discal band is also sinuous from its costal end; along the exterior margin is a row of black dentate spots: hindwing brownish speckled, and with a sinuous cluster of blackish speckles above the anal angle; a blackish marginal lunular line. Body greyish ochreous-white, abdomen brown speckled; thorax with a black-speckled collar; palpi at the sides and legs also speckled with dark brown.

Expanse $1\frac{1}{8}$ inch.

Genus BERTULA.

Bertula, Walker, Catal. Lep. Het. B. M. xvi. p. 162 (1858).

Forewing elongated, rather broad, apex pointed, exterior margin slightly convex, hardly oblique; cell extending beyond half the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end and touching the third near its base; discocellular convex, slender, radials from slight angle at each end; middle median from close to end of cell, lower at two-fifths; submedian curved from the base: hindwing broad, exterior margin convexly angular beyond the middle; cell nearly half the length; two subcostals from end of cell; discocellular slender, deeply concave, radial from below the middle; two upper medians from end of cell, lower at one-third; submedian and internal vein straight. Body moderately stout; palpi in the male curved upward over the head, stout, reaching hind part of the thorax, compressed, laxly squamose, third joint truncate at the tip and furnished with a long dense tuft beneath, which rests on the thorax; palpi in female shorter, second joint more laxly clothed and fringed above, third joint slender, lanceolate, tufted above in the middle; antennæ stout, biciliated with long lashes, the lashes being shorter and finer in the female; legs slender, fore tibiæ densely and compactly clothed in male, middle and hind legs compactly squamose, spurs long.

Type, B. abjudicalis.

BERTULA ABJUDICALIS.

Bertula abjudicalis, Walker, Catal. Lep. Het. B. M. xvi. p. 163 (1858), ♂.
Bocana tumidalis, Walker, Catal. Lep. Het. B. M. xvi. p. 176 (1858), ♀.

Purplish greyish-brown: forewing crossed by a short pale subbasal streak, an ochreous-brown broad inwardly-oblique medial band, the inner edge of the band being straight, and the outer edge in the male bent abruptly inward to half its width below the cell, and in the female is slightly waved; both the inner and outer

edge of the band is also bordered within by a parallel slender brown line, and the outer borders of the band in the male are also broadly defined by dark purple-black; a submarginal denticulated diffused black line, with inner ochreous border; and a marginal row of black points; a black orbicular spot, and black-bordered white lunate mark at end of the cell; hindwing pale purplish greyish-brown, with two short subanal black-bordered ochreous denticulated lines, and a marginal lunular line. Body, palpi, and legs dark purplish greyish-brown, base of abdomen ochreous; legs with ochreous bands.

Expanse, ♂ $\frac{7}{8}$, ♀ 1 inch.

BERTULA CONTINGENS.

Bertula contingens, Walker, Catal. Lep. Het. B. M. xvi. p. 245 (1858).

"Male. Cinereous-white: forewings speckled with black; lines black; interior line nearly straight and upright, abbreviated in front; exterior line composed of black marks, much bent outward; submarginal line very diffuse and indistinct; marginal dots blackish; orbicular and reniform marks indicated by two black dots, the latter narrow: hindwings semihyaline, with brown streaks along the veins towards the exterior border. Palpi long, stout, brownish, slightly inclined backward, rising high above thorax, second and third joints closely conjoined; antennæ setose to half the length; thorax brown and flecked with black in front. Abdomen testaceous, with some black flecks on the sides.

"Expanse 11 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus ECHANA.

Echana, Walker, Catal. Lep. Het. B. M. xvi. p. 195 (1858).

Wings rather short: forewing very broad externally; exterior margin slightly convex; with a large subfusiform costal fold beyond end of the cell above, and a corresponding depression of the wing beneath, the pouch being filled with a glandular patch of hairs; cell nearly half the length; subcostals dislocated, bordering the fold; discocellular concave; upper radial from below the fold near its end, lower radial and two upper medians on a footstalk beyond end of the cell, lower median at one-third before the end; submedian almost straight: hindwing broad, exterior margin convex in the middle; cell extending two-fifths the length; two subcostals on a footstalk one-fifth beyond the cell; discocellular slender, outwardly oblique, radial from below the middle; two upper medians on a footstalk about one-third beyond the cell, lower at one-third before the end; submedian and internal vein straight. Body moderately stout; palpi compressed, curved upwards; second joint fringed in front, third joint lanceolate, nearly as long as the second, with which it forms

a right angle and extends over the head; antennæ setose; fore tibiæ densely clothed, tufted beneath; middle and hindlegs long, slender, spurs very slender, long.

Type, E. abavalis.

ECHANA ABAVALIS (Plate 177, Fig. 10, ♂).

Echana abavalis, Walker, Catal. Lep. Het. B. M. xvi. p. 196 (1858), ♂.

Ochreous-brown. Male: forewing with a subfusiform costal fold above, the lappet being pilose beneath; a transverse very indistinct pale-speckled denticulated submarginal line, and a marginal row of brown points: hindwing cinereous-brown, with very indistinct traces of a darker streak at end of the cell, and two transverse denticulated fasciæ, both being more distinct on the under side. Legs with pale bands.

Expanse $\frac{9}{10}$ inch.

Genus CORGATHA.

Corgatha, Walker, Catal. Lep. Het. B. M. xvi. p. 215 (1858).

Wings small: forewing somewhat broad, triangular, apex almost subfalcate, exterior margin oblique, slightly convex; cell half the length; first and second subcostals emitted close to end of the cell, second trifid, fifth from end and touching third; discocellular concave, radials from the ends; middle median at one-sixth before end of the cell, lower at one-third; submedian curved: hindwing short; cell nearly half the length; two subcostals from end of the cell; discocellular concave, radial from lower end; two upper medians from end of the cell; lower about one-third. Body squamous; palpi porrect, as long as breadth of the head; second joint with a thick short tuft above, third joint conical, short, tufted above; antennæ minutely setose; legs bare, rather short and slender, spurs long.

CORGATHA ZONALIS.

Corgatha zonalis, Walker, Catal. Lep. Het. B. M. xvi. p. 216 (1858).

Male. Pale testaceous, minutely speckled with brown scales: forewing crossed by an antemedial and postmedial inwardly oblique brown-bordered whitish line, both lines curved inward at the costal end; a whitish submarginal denticulated line, and brown marginal points; a brown-speckled spot at end of the cell: hindwing with a postmedial similar brown-bordered whitish line, a pale denticulated submarginal line, and brown marginal points.

Expanse $\frac{5}{10}$ inch.

CORGATHA MINORALIS.

Bleptina minoralis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1164 (1865).

Female. Whitish testaceous. Wings partly tinged with ochreous; crossed by an inwardly-oblique straight subbasal and an antemedial brown line, a curved denticu-

lated postmedial line, followed by a prominent white-bordered diffused brown lunular line, and a slender brown marginal line; a brown-speckled reniform mark: hindwing with a similar medial, discal, and submarginal line.

Expanse $\frac{7}{10}$ inch.

CORGATHA OMARIUSALIS (Plate 177, Fig. 7).

Bleptina Omariusalis, Walker, Catal. Lep. Het. B. M. xix. p. 871 (1859).

Female. Pale testaceous, minutely brown-speckled: forewing crossed by an inwardly-curved subbasal pale bordered brown line, a similar almost straight antemedial line, and an undulated postmedial line, followed by a pale denticulated submarginal line, and a marginal black lunular line; a large pale-lined reniform mark: hindwing with a similar antemedial, medial, submarginal and marginal line, the two latter with black points. Tip of palpi with a black band.

Expanse $\frac{7}{10}$ inch.

CORGATHA RENALIS (Plate 177, Fig. 3).

Ochreous-white: forewing with reddish-ochreous speckled waved bands; a dark brown antemedial, medial, and a postmedial costal patch, beyond which is a reddish-ochreous apical patch, the latter being marked with some subapical black spots, and traversed by a marginal row of white-pointed black dentate spots; an outwardly oblique brown-lined recurved reniform mark: hindwing speckled with reddish-ochreous, with two blackish-speckled streaks above anal angle, and a marginal row of white-tipt black dentate spots. Abdomen with reddish-ochreous bands.

Expanse $\frac{6}{10}$ inch.

Genus ILYRGIS.

Ilyrgis, Walker, Catal. Lep. Het. B. M. xix. p. 879 (1859).

Wings short, broad: forewing triangular, costa arched at the base, apex slightly subfalcate, exterior margin moderately oblique, slightly convex in the middle; cell extending to half the length; first subcostal emitted at two-fifths before end of the cell, second from end of the cell, quadrifid; discocellular bent outward near each end, radials from the angles; middle median at one-sixth before end of the cell, lower at two-fifths; submedian slightly curved: hindwing short, exterior margin very convex; cell two-fifths the length; two subcostals from end of cell; discocellular concave, radial from near lower end; two upper medians from a footstalk one-fifth beyond end of cell, lower at one-third before the end; submedian and internal vein straight. Body moderately slender, squamous; palpi ascending, compressed, second joint rising to vertex, slightly curved, pubescent, third joint fusiform, about one-fourth length of second; antennæ broadly bipectinated; legs long, slender, smooth, spurs long.

ILYRGIS ECHEPHUREALIS.

Ilyrgis Echephurealis, Walker, Catal. Lep. Het. B. M. xix. p. 880 (1859).

Male. Pale brownish-cinereous: forewing crossed by an antemedial and a post-medial outwardly-recurved indistinct whitish-bordered brown denticulated line, and a straighter submarginal similar line, the lines being slightly dilated and whitish at the costal ends; marginal lunules brown; orbicular and reniform mark indistinct, pale brown: hindwing with a curved discal and submarginal similar line, and marginal brown lunular line. Front of thorax and head white; tip of palpi, and tarsi, with whitish bands; hind borders of abdominal segments whitish.

Expanse $\frac{8}{10}$ inch.

Genus BOCANA.

Lusia,* Walker, Catal. Lep. Het. B. M. xiii. p. 1113 (1857), ♀.
Bocana, Walker, *id.* xvi. p. 170 (1858), ♀.
Lamura, Walker, *id.* xvi. p. 189 (1858), ♂.
Bithiasa, Walker, *id.* xxxiii. p. 1116 (1865).

Forewing elongated, moderately broad; exterior margin slightly oblique and convex; cell extending half the length; first subcostal emitted at nearly three-fifths before end of the cell, second at one-fifth, trifid, fifth from end of the cell and joined by a short spur to third near its base; discocellular concave, bent at each end, radials from the angles; middle median from close to end of the cell, lower at two-fifths; submedian much curved from the base: hindwing broad, rather short; exterior margin convex; cell one-third the length; two subcostals on a footstalk one-sixth beyond end of the cell; discocellular slender, concave, radial from near lower end; two upper medians on a footstalk one-sixth beyond end of the cell; lower one-third before the end; submedian and internal vein straight. Body moderately slender; head and thorax, and abdomen at the sides, pilose, tip tufted in male; palpi ascending, long, compressed, second joint fusiform, broadly pilose in front, rising to the vertex, third joint lanceolate, slightly curved, two-thirds the length of second; antennæ bipectinated to tip in male, setulose in the female; legs compactly pilose, spurs long.

Type, B. manifestalis.

BOCANA MANIFESTALIS.

Bocana manifestalis, Walker, Catal. Lep. Het. B. M. xvi. p. 171 (1858), ♀.
Lamura oberratalis, Walker, Catal. Lep. Het. B. M. xvi. p. 189 (1858), ♂.

Male and female. Ferruginous greyish-brown: forewing with a transverse indistinct black outwardly-oblique undulated antemedial line, an inwardly-recurved

* Previously used by M. Edwards for a genus of Polypi.

denticulated postmedial line, and a zigzag submarginal line, each line ending in a pale ochreous spot on the costa, and the inner and outer line very indistinctly bordered on one side with pale speckles; a white orbicular dot and reniform mark, each with a black border: hindwing with a transverse medial and a submarginal indistinct black denticulated line, both with pale ochreous outer border. Abdomen with pale ochreous anal tuft; palpi at the tip, and bands on tarsi pale ochreous.

Expanse $1\frac{2}{10}$ inch.

BOCANA DETERMINATA.

Diomea repulsa, Walker, Catal. Lep. Het. B. M. xxxiii. p. 899 (1865), ♀.

Bithiasa determinata, Walker, Catal. Lep. Het. B. M. xxxiii. p. 1116 (1865), ♂.

Male and female. Ochreous-brown: both fore and hindwings comparatively broader and longer than in *B. manifestalis*. With similar transverse lines; orbicular spot with minute white centre; reniform mostly black in male and entirely black in female.

Expanse $1\frac{3}{8}$ inch.

Note.—This may probably be only a variety of *B. manifestalis.*

BOCANA SUBAPICALIS.

Female. Umber-brown: forewing with a very indistinct transverse antemedial and a postmedial denticulated blackish line, both with traces of a whitish-speckled outer border, followed by a slight whitish-speckled denticulated submarginal line, which ends before reaching the costa, and on the outer side of its upper end is a subapical cluster of white speckles; a slight white orbicular dot and slender lunate mark at end of the cell; hindwing with a transverse medial and discal white-speckled denticulated line. Cilia alternated with ochreous spots. Body, palpi, and legs dark brown; tarsi with pale bands.

Expanse ♀ $1\frac{3}{10}$ inch.

BOCANA GEOMETROIDES.

Lusia geometroides, Walker, Catal. Lep. Het. B. M. xiii. p. 1113 (1857), ♀.

Dark violaceous-brown: forewing crossed by an antemedial, a postmedial, and submarginal denticulated line composed of small white flecked spots; a quadrate cluster of white flecks below the apex; cilia with white spots; a minute white linear spot in middle of the cell: hindwing crossed by a medial white flecked denticulated line, a submarginal and a marginal row of white points; cilia with white spots. Palpi and legs with pale bands.

Expanse $1\frac{3}{10}$ inch.

Genus ADRAPSA.

Adrapsa, Walker, Catal. Lep. Het. B. M. xvi. p. 169 (1858).

Male. Wings moderately broad, very slightly denticulated: forewing elongated,

nearly rectangular at the tips, exterior margin slightly convex; cell extending one-half the length; first subcostal emitted at one-half before end of the cell, second trifid, fifth from end of the cell; discocellular slender, radials from close to the ends; middle median close to end of cell, lower at one-half before the end; submedian recurved: hindwing convex externally; cell two-fifths the length; two subcostals on a footstalk beyond the cell; discocellular slender, radial from lower end; two upper medians on a footstalk beyond the cell, lower at one-third before the end; submedian and internal vein straight. Body moderately stout; palpi erect, long, compressed, laxly squamose, second and third joint slightly tufted above; third joint linear, of the same length as second; maxillary palpi well developed, lanceolate; antennæ pectinated to the end on the under side, the branches longest in the middle, the shaft incrassated before the middle and with rather long tufts from the base and minute tufts along the middle on the upper side, and fine short lashes thence to the tip; fore femora and tibiæ short, stout, tufted, middle and hindlegs bare, rather long and slender, spurs long.

ADRAPSA ABLUALIS.

Adrapsa ablualis, Walker, Catal. Lep. Het. B. M. xvi. p. 170 (1858).

Male. Cinereous-brown. Wings with the usual three lines; interior and discal lines straight, oblique; interior line dark brown; discal line whitish; submarginal line denticulated, whitish, indistinct, incomplete. Forewing with a clustre of whitish scales below the apex, and a dark brown reniform mark containing a white dot. Tip of palpi, and tarsi with pale bands.

Expanse 1 inch.

Genus CATADA.

Catada, Walker, Catal. Lep. Het. B. M. xvi. p. 209 (1858).

Forewing moderately broad, acutely rectangular at the tips, exterior margin slightly oblique, somewhat angular in the middle; cell extending to more than half the length; first subcostal emitted at one-third before end of the cell, second at one-sixth, trifid, third from very close to base of second, fourth at two-thirds from base of third, fifth from end of cell and touching third close to its base; discocellular slender, slightly bent near each end, radials from the angles; middle median from angle close to end of cell, lower at two-fifths before the end; submedian much curved from the base: hindwing short, exterior margin somewhat angular in the middle; slightly denticulated; cell half the length; two subcostals from end of cell; discocellular slightly concave, radial from its middle; two upper medians from end of cell, lower at one-third; submedian and internal vein straight. Body rather stout; abdomen smooth; palpi long, curved upward, second joint pyriform, clothed with thick set

lax scales in front, third joint very slender, linear, longer than second; antennæ stout, filiform; legs rather long, bare, spurs very long; fore tibiæ short and with a pilose appendage beneath.

CATADA VAGALIS.

Bocana vagalis, Walker, Catal. Lep. Het. B. M. xvi. p. 172 (1858), ♀.
Catada glomeralis, Walker, Catal. Lep. Het. B. M. xvi. p. 210 (1858), ♀.

Male and female. Purple-brown, glossed with purplish-grey in some aspects: forewing with a transverse darker brown sinuous antemedial line, and a medial prominent white line, the latter encompassing the reniform mark, which is biangulated outward at end of the cell; a black orbicular spot in middle of the cell; a discal zigzag row of black points with pale tips; four white dots on the costa before the apex: hindwing duller brown; cilia cinereous. Body dark purple-brown; front of head and palpi blackish; shaft of antennæ, front of head, and palpi edged with white; legs dark purple-brown, with white bands.

Expanse, ♂ $\frac{8}{10}$, ♀ 1$\frac{1}{10}$ inch.

Genus IMMA.

Imma, Walker, Catal. Lep. Het. B. M. xvi. p. 195 (1858), ♂.
Pingrasa, Walker, Catal. Lep. Het. B. M. xvi. p. 226 (1858), ♀.

Wings small: forewing rather narrow, exterior margin oblique; cell two-thirds the length; first subcostal emitted at one-half before end of the cell, second at one-sixth, third from close to end, both free, fourth from end of the cell, bifid; discocellular erect, bent near the ends, radials from the angles: middle median from angle at end of the cell, lower close to the end; submedian curved upward: hindwing somewhat produced at the apex, exterior margin very oblique, slightly convex, abdominal margin lanuginose above; cell two-thirds the length; two subcostals on a footstalk at half beyond end of the cell; discocellular concave, radial from near upper end; middle median from angle below end of the cell, lower near the end; submedian and internal vein recurved. Body stout, densely clothed; palpi stout, pubescent, curved upward, third joint lanceolate in male, linear in female, nearly half length of second; antennæ simple, slender; legs stout, femora fringed, somewhat dilated, tibiæ densely tufted in male, in female rather slender and compactly clothed; spurs long.

IMMA BUGOSALIS.

Imma bugosalis, Walker, Catal. Lep. Het. B. M. xvi. p. 195 (1858), ♂.
Pingrasa accuralis, Walker, Catal. Lep. Het. B. M. xvi. p. 227 (1858), ♀.

Pale violaceous ochreous-brown: forewing with an indistinct brown outwardly curved lunular mark at end of the cell: hindwing with the outer border dusky brown; abdomen dusky brown; tarsi with dark brown bands.

Expanse $\frac{8}{10}$ inch.

Genus PANTURA.

Male. Forewing long, narrow, exterior margin slightly convex; cell extending to half the length, narrow; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, fifth from end and joined by a short spur to third near its base; discocellular concave in the middle, bent outward close to ends, radials from the angles; middle median from close to end of cell, lower at two-fifths; submedian recurved: hindwing short, rather narrow, exterior margin very oblique, convex; cell two-fifths the length; two subcostals from end of cell; discocellular very concave, radial from near lower end; two upper medians from end of cell, lower at one-third; submedian and internal vein straight. Body moderately stout, frontal tuft conical; abdomen smooth; palpi curved upwards, second joint fusiform, compressed, extending half its length beyond the head, smoothly squamous; third joint lanceolate, acute at the tip, of the same length as second; antennæ serrated, ciliated; legs stout, femora fringed beneath, tibiæ incrassated, compactly pilose, spurs long.

Type, P. ophiusoides.

PANTURA OPHIUSALIS (PLATE 177, FIG. 4).

Bocana ophiusalis, Walker, Catal. Lep. Het. B. M. xvi. p. 173 (1858).

Male and female. Purplish ferruginous-brown: forewing speckled with minute cinereous scales; crossed by two outwardly-oblique antemedial and a medial indistinct undulated darker brown line, an erect postmedial and two outer similar lines, each line bent inward near the costal end, the inner and three outer lines with a pale border, and between the costal ends of the two outer lines is a dark brown subquadrate patch; a white orbicular dot and a black broken reniform streak: hindwing with a dusky brown marginal border; cilia paler. Thorax and base of abdomen cinereous brown; collar, head, palpi, and bands on tarsi dark brown.

Expanse $1\frac{1}{4}$ to $1\frac{1}{2}$ inch.

Genus LABANDA.

Labanda, Walker, Catal Lep. Het. B. M. xvii. p. 284 (1859).

Forewing elongated, narrow, obtusely pointed at the apex, exterior margin rather oblique, slightly convex; cell extending beyond half the length; first subcostal emitted at one-half before end of the cell, second at one-sixth, trifid, fifth from end of cell and slightly touching third near its base; discocellular concave, radials from upper end and at a slight angle close to lower end; middle median from angle close to end of cell, lower at two-fifths; submedian slightly curved: hindwing short, exterior margin very oblique, convex; cell more than half the length; two subcostals from end of cell; discocellular outwardly-oblique, very concave, radial from angle

close to lower end; middle median close to end, lower at two-fifths; submedian and internal vein recurved. Thorax moderately stout; abdomen keeled above, crested at the base, much attenuated and extending half beyond hindwings in the male, and with a clavate appendage above at its tip, which is furnished with two large lateral valves; vertex forming a compact flat somewhat raised tablet, which projects a little above the base of the antennæ; palpi obliquely ascending, slightly curved; second joint much compressed, extending half beyond the eyes, smoothly squamose, third joint linear, nearly as long as the second; antennæ almost filiform, minutely setose; legs rather long, smoothly squamose, spurs very long.

Type, L. herbealis.

LABANDA MUSCOSA.

Othora muscosa, Walker, MS. in Coll. Brit. Mus.
Labanda saturalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1251 (♀ only).
? Diomea muscosa, Walker, *id.* xxxiii. p. 898.

Female: forewing olive green, densely black-speckled; costal edge ochreous; crossed by an outwardly oblique subbasal, antemedial, and a postmedial sinuous black line, followed by a less defined zigzag submarginal line; reniform mark longitudinally oval: hindwing and abdomen purplish-brown; dorsal tuft blackish. Thorax and head green and black speckled; two glossy green tufts at base of thorax; palpi and legs with blackish bands.

Expanse ♀ $1\frac{3}{10}$ inch.

Note.—This may probably be the female of the preceding.

LABANDA SEMIPARS.

Bryophila semipars, Walker, Catal. Lep. Het. B. M. xv. p. 1647 (1858), ♀; Moore, Lep. Ceylon, iii. p. 3.
Bocana Pamphosalis, Walker, Catal. Lep. Het. B. M. xix. p. 887 (1859), ♀.
Gerbatha laticincta, Walker, *id.* xxxiii. p. 913 (1865), ♀.

Male and female. Forewing olivescent ochreous-brown, in some lights changing to purplish-brown; with a transverse basal indistinct pale olivescent-bordered blackish zigzag line, and a more distinct similar antemedial and postmedial line, followed by a similar submarginal denticulated line, the latter line with two short longitudinal inner black streaks below the apex; the area between the antemedial and postmedial line pale olivescent-ochreous, speckled with brown scales, and contains a broken black streak at end of the cell and from which extends a slender streak to the lower subapical streak: hindwing purplish cinereous-brown, with a pale olivescent-ochreous denticulated marginal line. Thorax and head purplish-brown, speckled with ochreous; abdomen long, extending half beyond the hindwings, purplish cinereous-brown, with

slender dorsal black tufts; palpi brown; legs pale ochreous, tibiæ and tarsi with dark brown bands.

Expanse 1 to $1\frac{2}{10}$ inch.

LABANDA ACHINE.

Bocana Achine, Felder et Rogenhoffer, Nov. Voy. iv. pl. 120, fig. 18 (1874), ♀.

Male and female. Forewing brownish-black, densely speckled with prominent olive-green scales; with a transverse outwardly-oblique curved subbasal green-bordered black line, a similar zigzag antemedial line, a less defined green-speckled postmedial line, and a submarginal line; the two inner lines being green, bordered on both sides; a black reniform mark: hindwing purplish-brown. Cilia dark cinereous-brown. Thorax and head black and green speckled; palpi purplish-brown, the upper and lower edge being ochreous; abdomen long and slender in male, purplish-brown above, with black dorsal basal tufts in both sexes, anal tuft in male ochreous; legs ochreous, with purple-brown bands above.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{3}{8}$ inch.

LABANDA CHLOROMELLA.

Diomea chloromella, Walker, Catal. Lep. Het. B. M. xv. p. 1804 (1858), ♀.
Plotheia chloromella, Moore, Lep. Ceylon, iii. p. 111.
Labanda herbealis, Walker, Catal. Lep. Het. B. M. xvii. p. 284 (1859), ♂.

Male. Forewing olive-green, crossed by an outwardly-oblique subbasal, antemedial and a postmedial sharply-defined blackish zigzag duplex line, followed by a submarginal line; the areas between the lines clouded with black scales; the antemedial and postmedial line indistinctly bordered with minute white scales: hindwing purplish-brown. Cilia greyish-ochreous, with a slender black inner line.

Female. Brighter olive-green: forewing with the subbasal, antemedial, and postmedial lines with white centres, the areas between the lines more densely clouded with darker black scales; and with a black orbicular and reniform spot. Thorax and head olive-green, speckled with black scales; abdomen purplish-brown; dorsal tufts black, anal tuft in male ochreous; legs ochreous, with brown bands, which are darkest on the forelegs. Underside: forewings pale purplish-brown: hindwings pale ochreous, with a medial and a broad marginal dark purplish-brown band.

Expanse 1 inch.

Genus OROSA.

Orosa, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1222 (1865).

"Female. Wings rather short and broad: forewings slightly rounded at the tips; costa convex; exterior margin convex, hardly oblique; second inferior vein nearer to the first than to the third, fourth remote from the third. Body rather stout;

abdomen extending a little beyond the hindwings; palpi slender, squamous, obliquely ascending, as long as the breadth of the head, rising a little higher than the vertex; third joint lanceolate, nearly as long as the second; antennæ rather short and slender; legs smooth, short, spurs moderately long and stout.

"*Note.*—This genus has a resemblance to Gadirtha, and to some other groups of Hypogrammidæ."

OROSA TORTRICOIDES.

Orosa tortricoides, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1223 (1865).

"Female. Cinereous; paler beneath: forewings with two black basal diffuse lines which extend across half the breadth from the costa; an antemedial line composed of three small black marks; of these the second is much shorter than the first and much narrower than the third, which is near the interior border; an exterior line of black points, which is much curved outward, and approaches the preceding line at each end, and is accompanied by a small black patch near the interior border; an indistinct zigzag blackish submarginal line.

"Expanse $9\frac{1}{2}$ lines."

Genus PASIRA.

Pasira, Moore, Desc. Lep. Coll. Atkinson, p. 197 (1882).

Forewing more acuminate at the apex than in Rivula (*R. sericealis*), exterior margin more erect: hindwing shorter, and the male having a groove, which is set with short hairy scales on both sides of the wing between the median and internal veins, and extends from the outer margin to below end of the cell, from whence it is bent below the median vein. Body slightly stouter than in Rivula; projecting front of the head, palpi, and legs similar. Venation also similar.

PASIRA BIATOMEA.

Pasira biatomea, Moore, P. Z. S. 1883, p. 29.

Male and female. Pale ochreous: forewing with two minute black discocellular superposed spots, another spot above the submedian vein, and a marginal row of still smaller dots, the apical dot most prominent: hindwing with indistinct brownish-ochreous outer border. Underside brighter coloured: hindwing brown-speckled along the costal border and apex; with a blackish discocellular streak and a marginal row of small dentate spots.

Expanse 1 inch.

PASIRA RENALIS.

Male and female. Pale brownish-ochreous: forewing with a prominent black-speckled reniform spot; an ill-defined transverse antemedial and a recurved postmedial series of minute black points, and a marginal row of black points: hindwing

and abdomen cinereous brownish-ochreous. Thorax, head, palpi, and legs pale brownish-ochreous.

Expanse, ♂ ♀ $\frac{8}{10}$ inch.

Genus DRAGANA.

Dragana, Walker, Catal. Lep. Het. B. M. xvi. p. 200 (1858).
Apphadana, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1212 (1865).

Wings small: forewing elongated, triangular; cell more than half the length, narrow; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth ascending obliquely upward from end of cell and touching third close to its base; discocellular extremely slender, concave; upper radial from end of cell in a direct line with the subcostal, lower radial from near the lower end; middle median from close to end of cell, lower at two-fifths; submedian nearly straight: hindwing short, exterior margin convex, abdominal margin very short; cell nearly half the length; two subcostals from end of cell; discocellular concave, radial from below the middle; two upper medians from end of cell, lower at two-fifths; submedian and internal vein nearly straight. Body moderately stout; smooth, frontal tuft conical; palpi short, stout, slightly ascending, pubescent, third joint very short, obtusely conical; antennæ curved, pectinated and ciliated in male, setose in female; legs rather stout, fore tibiæ laxly clothed, middle and hind legs almost bare.

Type, D. pansalis.

DRAGANA PANSALIS.

Dragana Pansalis, Walker, Catal. Lep. Het. B. M. xvi. p. 200 (1858), ♂.
Apphadana evulsalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1213 (1865), ♂ ♀.
Poaphila concors, Walker, Catal. Lep. Het. B. M. xxxv. p. 1969 (1866), ♂.

Cinereous-ochreous. Male: forewing with the lines inwardly oblique, brownish, indistinct, denticulated; marginal points black; the submarginal line more distinct and with a minute black mark before the middle and another near the posterior end; outer border of the wing from the submarginal line sometimes darker cinereous; a minute brown orbicular dot and a very indistinct reniform mark: hindwing with similar wavy lines. Female generally darker, the lines more distinct, and the outer border more cinereous. Body cinereous-ochreous; legs ochreous.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Genus CHUSARIS.

Chusaris, Walker, Catal. Lep. Het. B. M. xvi. p. 215 (1858).

Wings small: forewing rather long, narrow; apex pointed, exterior margin slightly oblique; cell extending half the length; first subcostal emitted at one-third before end of the cell, second trifid, fifth from end of the cell, free; discocellular erect, radials from near the ends; middle median from close to end of cell, lower at one-third; submedian recurved: hindwing short, convex externally; cell extending

to half the length; two subcostals from end of cell; discocellular slender, radial from near lower end; two upper medians from end of cell, lower at one-third. Body rather short; frontal tuft triangular; palpi long, second joint stout, porrect, pilose above, third joint lanceolate, half length of second, projected upward; antennæ simple; legs stout, laxly squamose.

Type, C. retatalis.

CHUSARIS RETATALIS.

Chusaris retatalis, Walker, Catal. Lep. Het. B. M. xvi. p. 215 (1858).
Bleptina spurcatalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1163 (1865).

Cinereous, sparsely speckled with minute brown scales: forewing with some pale and dark brown points on the costal edge; crossed by an antemedial and a medial brown duplex lunular band, a submarginal denticulated pale-bordered line, which has a broad brown dilated costal end; a marginal row of black points; a brown orbicular and reniform mark, and a black dot at base of the wing: hindwing with ill-defined brown short lunular bands above the anal angle. Tip of palpi, and tarsi with blackish bands; palpi brown beneath.

Expanse $\frac{6}{10}$ inch.

CHUSARIS PUNCTILINEALIS.

Chusaris punctilinealis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1175 (1865).

Pale purplish-cinereous: forewing crossed by a waved antemedial whitish lunular line, a recurved postmedial macular line composed of blackish dentate spots with white tips, followed by a marginal row of white-pointed black dots; a brown orbicular dot, and a whitish-bordered black bipupilled reniform mark: hindwing with a black dot at end of the cell, a curved discal macular line of white-tipt black dentate spots, and marginal line. Abdomen ochreous-brown; tip whitish.

Expanse $\frac{7}{10}$ inch.

Genus LUCERIA.

Luceria, Walker, Catal. Lep. Het. B. M. xix. p. 853 (1859).

Forewing elongated, moderately broad, rectangular at the tips, costa very slightly convex, exterior margin rather oblique; cell extending three-fifths the length; first subcostal emitted at two-fifths before end of the cell, second at one-fifth, trifid, fifth from end of the cell, free; discocellular bent near each end, radials from the angles; middle median at one-third before end of the cell, lower at two-fifths: hindwing somewhat produced apically, exterior margin convex in the middle; cell more than half the length; two subcostals from beyond end of the cell; discocellular slightly bent in the middle, radial from below the angle; two upper medians from end of the cell, lower at one-third. Body moderately stout, short; palpi long, second joint porrect, broad, compressed, projecting two-thirds beyond the head, pilose, third joint

lanceolate, slender, ascending obliquely upward, half length of the second; antennæ slender, simple; legs smooth, spurs long.

LUCERIA NOVATUSALIS.

Luceria novatusalis, Walker, Catal. Lep. Het. B. M. xix. p. 854 (1859).

Testaceous-yellow: forewing slightly and minutely speckled with brown scales, most so along the exterior border; a black basal dot and a prominent black white-pointed spot at end of the cell, the latter near the inner side of a slight straight inwardly-oblique blackish line; a marginal row of black points: hindwing whitish-cinereous, with a slender brown marginal line. Second joint of palpi brown on its outer side, third joint with a dark brown band; forelegs dark brown, with pale bands.

Expanse $\frac{8}{10}$ inch.

Genus RIVULA.

Rivula, Guénee, Duponchel's Catal. Lep. Eur. p. 206 (1846); Delt. et Pyral. p. 47 (1854); Walker, Catal. Lep. Het. B. M. xvi. p. 92.

Evergestis (part), Hübner, Verz. bek. Schmett. p. 354.

Margaritia (part), Stephens, Illust. B. Ent. Haust. iv. p. 58 (1834).

Wings small: forewing elongated, somewhat triangular, exterior margin obliquely convex; cell extending three-fifths the length; first subcostal emitted at one-third before end of the cell, second at one-sixth, third from end of the cell, trifid; discocellular concave, radials from near the ends; middle median from close to end of the cell, lower at one-third: hindwing short, exterior margin oblique, convex in the middle; cell one-half the length; two subcostals from a short distance beyond end of the cell; discocellular concave, radial from near lower end; two upper medians on a footstalk nearly half beyond end of the cell, lower at one-third before the end. Body rather slender; palpi short, stout, porrect, compressed, pilose, third joint minute, conical; antennæ slender, minutely ciliated with very fine short lashes in male; legs long, laxly squamose, spurs long.

Type, R. sericealis.

RIVULA BIOCULALIS.

Rivula bioculalis, Moore, Proc. Zool. Soc. 1877, p. 614.

Pale ochreous-yellow: forewing with five outwardly-oblique transverse short white streaks on the costa, a row of white-tipt black dots on the exterior margin, two superposed white-bordered black dots at end of the cell, and a transverse discal and a submarginal curved wavy white-bordered brown line: hindwing paler, brownish-ochreous along exterior border. Underside paler: forewing brownish in the middle.

Expanse $\frac{4}{8}$ inch.

Genus BYTURNA.

Byturna, Moore, Proc. Zool. Soc. 1883, p. 28.

Wings very small: forewing narrow, elongated; costa straight, apex acute, exterior margin slightly convex; costal vein long, extending to two-thirds the margin; first subcostal branch emitted at one-half, and second at one-fourth before end of the cell, second trifurcate, the third being thrown off at three-fourths and fourth from one-fourth beyond the base, fifth from end of the cell and looped to fourth close to its base; discocellular bent near upper and lower end, very concave, slender; radials from the angles; upper median from angle at lower end of the cell, middle at one-eighth and lower at one-third before its end; submedian straight: hindwing elongated, oval; costal vein straight, extending to apex; two subcostal branches from end of the cell; discocellular concave, radial from the middle; two upper medians from beyond end of the cell, lower at one-fourth before its end; submedian and internal vein straight. Body stout; palpi long, ascending, extending to a level with the vertex, second joint squamose, laterally broadest at the apex, third joint slender, naked, about half length of second; antennæ finely setose; legs squamose, fore tibia tufted beneath.

Type, B. digramma.

This genus has much the appearance of *Rivula*.

BYTURNA DIGRAMMA.

Bocana digramma, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1170 (1865).
Byturna digramma, Moore, Proc. Zool. Soc. 1883, p. 29.

Pale ochreous: forewing with a few indistinct brown speckles, an incomplete zigzag postmedial indistinct brown line which includes a brown mark beyond end of the cell; submarginal line zigzag, very indistinct; marginal points brown; two superposed black dots at end of the cell. Body, head, palpi, and legs pale ochreous.

Expanse $\frac{6}{10}$ inch.

BYTURNA CUCULLATA.

Ochreous: forewing with two equidistant black spots on the costa, the outer spot recurved outward, and in some specimens joined to a blackish spot beyond end of the cell; reniform mark defined by two superposed black dots; a few brown speckles before the apex; marginal points more or less indistinct, brown: hindwing with a slight cinereous-tinged outer border. Collar in front of thorax, head, palpi, and forelegs black.

Expanse $\frac{6}{8}$ inch.

Family PYRALIDÆ.

Wings generally narrow; never elevated in repose, nor wrapped on the body; entire; shining, often iridescent, and semihyaline. Thorax globose, short; abdo-

men long, smooth, squamous, acute at the tip, conical or tufted in male. Antennæ slender, filiform or moniliform; often long; some ciliated, or finely pectinated, or with a basal tuft. Labial palpi generally alike in both sexes, sometimes rostriform, in others of the usual shape, rarely tufted and reflexed over the head. Maxillary palpi very frequently distinct. Legs long, slender, smooth, rarely villose, tarsi and spurs long.

Larva with 16 feet; generally short, rather thick, attenuated at each end; sometimes warty, some also slightly pilose. Lives concealed; generally enclosed between the leaves of food-plant united together by silken threads, or in silken galleries among moss and lichens. One group lives on plants under water, either in a case filled with air, or quite exposed to the water and then breathing by means of branchiæ.

Pupa in a slight cocoon within places of feeding. Chrysalis generally pointed at the ends; some with a lingual and pedal protuberant sheath.

Genus VITESSA.

Vitessa, Moore, Catal. Lep. Mus. E. I. C. ii. p. 299 (1858-9); Lederer, Pyr. Wien. Ent. Monats. vii. p. 354 (1863).

Cosmethis (part), Hübner, Verz. bek. Schmett, p. 179.

Forewing long, narrow; cell extending nearly three-fifths the length; first subcostal emitted at one-third before end of the cell; second immediately before the end, free, third from the end, trifid; discocellular very slender, deeply concave, bent close to upper end, radial from the upper end; two upper medians on a footstalk beyond end of the cell, second close to the end, first (or lower) about one-fourth before the end; submedian almost straight: hindwing rather long, apex obtuse, exterior margin very oblique, slightly convex, abdominal margin short; subcostal very slender, running close under the costal; cell one-third the length at its upper end, and nearly two-thirds at its lower end; two subcostals on a footstalk beyond end of the cell; discocellular very slender, concave anteriorly, its lower end extending obliquely outward; two upper medians on a footstalk beyond end of the cell, second at one-sixth, first (or lower) at one-third; submedian and two internal veins at equal distances apart. Body moderately stout; abdomen depressed and broadest at the apex, with laxly-clothed valvular anal appendages in male; labial palpi obliquely ascending, long, rather slender, squamous, second and third joints of equal length; maxillary palpi slender; antennæ in male pectinated to near the tip, the branches pubescent; legs strong, rather long; tibiæ and tarsi clothed with lax spiny scales, spurs long.

Type, V. Suradeva.

Note.—This Lithosiid-looking insect is placed in this family with considerable doubt.

VITESSA RAMA (Plate 178, Fig. 4, ♂).

Forewing with an interrupted transverse basal and a subbasal band, and the outer half glossy blue-black, the intermediate basal area ochreous; the middle area, a large oval discal spot and a lower streak, and very slender longitudinal streaks between the outer veins glossy white: hindwing white, with a costal and broad outer marginal black band; the cilia edged with white. Head, thorax, first and second joints of palpi, basal joint of antennæ in front, and anal tuft ochreous-yellow; thorax with large black spots; abdomen black, with white bands; antennæ black; femora above, tibiæ, and tarsi black; femora beneath, bands on tibiæ and tarsi, and the spurs, white.

Expanse $1\frac{1}{2}$ inch.

Comparatively smaller and shorter than *V. Suradeva.* Forewing with the basal bands slightly broader, and the white streaks between the outer veins conspicuously more slender: hindwing with the white basal area smaller in size, and the marginal black band of more equal width and broader at the anal end. All the legs and tarsi with white bands.

Genus TYSPANA.

Differs from Vitessa in the forewing having the costa somewhat arched and the apex convex; first subcostal emitted at one-fourth before end of the cell, third and fifth from the end, third bifid; discocellular slightly concave, radial from near upper end; two upper medians from angles at end of the cell, second near the end, first (or lower) at one-third: hindwing rather long, exterior margin convex; cell about one-third the length; two subcostals from end of the cell; discocellular bent outwardly before the middle, lower end long and oblique; three upper medians from angles at end of the cell, lower at one-third; a submedian and two internal veins. Body moderately stout; abdomen keeled above, apex pointed; labial palpi obliquely ascending, laxly squamous in front, short, extending only half its length beyond the head; maxillary palpi slender, ascending; legs squamous; tibiæ slightly pilose; middle and hind spurs long; antennæ setaceous.

TYSPANA VITESSOIDES (Plate 178, Fig. 3, 3*a* larva).

Forewing pale sulphur-yellow; with an interrupted purplish-black transverse narrow basal, an outwardly-oblique subbasal, an entire discal band, and longitudinal streaks between the outer veins; cilia also black: hindwing white, with the costal border and broad outer marginal band pale purplish-black; cilia glaucescent-black. Thorax, head, and base of palpi sulphur-yellow; abdomen ochreous-yellow, with black bands on basal segments; thorax striped with black; antennæ,

tip of palpi, and legs black; femora beneath, and bands on the tibiæ and tarsi white.

Expanse $1\frac{1}{8}$ inch.

Genus LETCHENA.

Forewing narrow, trigonate, apex very acute, exterior margin very oblique; cell three-fifths the length; first subcostal emitted at about one-half before end of the cell, fifth from the end; radials from upper and lower angle of discocellular; middle median from close to end of the cell, lower at one-half: hindwing short, apex convex, anal angle rather pointed; cell one-third the length; first subcostal from before end of the cell; radial from lower end of discocellular; middle median close to end of the cell; lower about one-half. Body stout; abdomen smooth; palpi small, oblique, smooth, cylindrical, second joint extending slightly beyond the head, third joint very short, obtuse; antennæ thick, simple; legs squamous, tibiæ thickish, spurs long.

Type, L. Thyralis.

LETCHENA THYRALIS (Plate 178, Fig. 10).

Pyralis Thyralis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1234 (1865).

Chalybeous olivaceous-cinereous; shining, smooth. Both wings with a black-speckled red marginal border; cilia white. Forewing with a transverse discal cluster of five yellow and red-bordered black-lined diaphanous-white spots; some black points along the costa. Palpi, tibiæ, and tarsi with black bands; tip of abdomen white.

Expanse $\frac{6}{10}$ inch.

LETCHENA ELARALIS.

Pyralis Elaralis, Walker, Catal. Lep. Het. B. M. xix. p. 901 (1859).

Chalybeous cinereous-red. Both wings numerously covered with short transverse brown strigæ. Cilia paler, with a black inner line. Body brown-speckled; tip of abdomen reddish; palpi and legs cinereous-brown; tarsi with black bands.

Expanse $\frac{9}{10}$ inch.

Genus STERICTA.

Glossina,* Guénee, Delt. et Pyr. p. 124 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 273.
Stericta, Lederer, Pyr. Wien. Ent. Monats. vii. p. 340 (1863).

Male. Forewing elongated, rather broad; apex pointed, exterior margin oblique, slightly convex, posterior margin convex towards the base; cell extending to near half the length; first subcostal emitted at two-fifths before end of the cell, second free, third trifid; discocellular deeply concave, radials from the ends; middle median close to end of the cell, lower at one-third; submedian slightly curved, with a short

* Used in 1830 for a genus of Diptera.

slender lower branch: hindwing short, broad, apex and exterior margin very convex; cell one-third the length at its upper end, nearly half at its lower end; two subcostals from the end; discocellular bent before the middle, lower end very oblique and long, radial from the extreme lower end; middle median close to end of cell, lower at one-third; submedian and two internal veins straight. Body robust; labial palpi long, rather slender, spindle-shaped, ascending, curving half its length closely over the head, smoothly squamous, second joint broad in front, tapering; third joint rather long, pointed; maxillary palpi short, slender; antennæ minutely and finely pectinated; a lengthened tuft of long spatular scales projected over the thorax from base of the antennæ; legs robust, laxly squamous; femora and tibiæ thick, spurs long, stout.

Type, S. divitalis.

STERICTA DIVITALIS.

Glossina divitalis, Guénee, Delt. et Pyr. p. 125, pl. 7, fig. 4 (1854), ♀.
Stericta divitalis, Lederer, Pyr. Wien. Ent. Monats. vii. p. 340 (1863).
Locastra Phereciusalis, Walker, Catal. Lep. Het. B. M. xvi. p. 159 (1858), ♂.

Male and female. Forewing dark rufescent-brown, black speckled; with a transverse subbasal, medial, and a postmedial dark olive-yellow sinuous band, and a longitudinal band of the same colour extending from the base to middle of the exterior margin; a marginal row of black dentate spots; a black-tipt white dot at end of the cell, and a black dot at the base: hindwing pale rufescent-brown. Cilia rufescent. Thorax dark olive-yellow, black speckled; abdomen pale rufescent-brown; legs brown, black speckled, with black bands.

Expanse $1\frac{1}{4}$ inch.

STERICTA HELVIALIS (Plate 178, Fig. 1 ♀, 1*a* larva).

Pyralis vitialis, Walker, Catal. Lep. Het. B. M. xix. p. 897 (1859), ♀.
Pyralis Helvialis, Walker, *id.* p. 915, ♂.

Forewing testaceous; black and red speckled; the black speckles mostly forming a basal band with inwardly-oblique border, an oblique apical patch, and a discal denticulated line; a marginal row of black dentate spots: hindwing and abdomen pale cinereous-testaceous, with a pale subanal streak. Cilia pale testaceous, with a reddish inner line and blackish spots. Body and legs pale testaceous; tarsi with black bands.

Expanse 1 to $1\frac{1}{4}$ inch.

Larva rather thick, attenuated at the ends; with a few very fine short dorsal hairs; colour red; with a blackish dorsal line and a broad subdorsal longitudinal band, a lateral line, and some sublateral marks. Cocoon reddish. Pupa red. "Feeds on Cinnamomium" (*Thwaites*).

Genus ORTHAGA.

Orthaga, Walker, Catal. Lep. Het. B. M. xvi. p. 191 (1858); *id.* xxvii. p. 103 (1863).

Male. Forewing moderately short and broad, exterior margin slightly oblique; cell extending about one-half the length; subcostals swollen towards the middle and accompanied by a swollen glandular pouch between them and the costa; first subcostal emitted at one-fifth before end of the cell, second and third from the end, third trifid; discocellular deeply concave, radials from near the middle and extreme lower end; middle median close to the end, lower at one-sixth; submedian curved near the base: hindwing short, broad, apex convex; cell two-fifths the length, broad; two subcostals from end of the cell; discocellular concave, lower end very oblique and long; radial and upper median from the extended end of the cell, middle median from close to the end, lower at nearly one-third; submedian and two internal veins recurved.

Body rather stout; head tufted above; labial palpi ascending, curved upward close to the head, reaching to level of the vertex, squamous, broad across the front, third joint lanceolate; maxillary palpi short, pilose; proboscis thick and pubescent at the base; antennæ finely ciliated; legs stout, laxly squamous, spurs long; tibiæ slightly pilose beneath.

Female: forewing with the subcostals not swollen, and no costal glandular pouch.

Type, O. Euadrusalis.

ORTHAGA EUADRUSALIS (Plate 178, Fig. 2, 2*a* ♂ ♀, 2*b* larva).

Orthaga Euadrusalis, Walker, Catal. Lep. Het. B. M. xvi. p. 191 (1858), ♀.

Male. Forewing olivaceous brownish-ochreous, tinged with vinous-brown at the apex, very sparsely black speckled; crossed by a black-speckled broken zigzag antemedial line, and a postmedial outwardly-curved denticulated line which is broadest towards the costa, followed by a marginal row of black lunules; below the apex is a black-speckled streak; a black-speckled lunule at end of the cell, and a spot at base of the wing: hindwing pale cinereous-brown, tinged with vinous-brown. Cilia pale brownish-ochreous, with black spots. Body brownish-ochreous; abdomen speckled with dark brown; tibiæ and tarsi with black bands above.

Female: forewing with the basal and upper discal area whitish, the transverse antemedial and postmedial black-speckled lines less defined.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{2}{10}$ inch.

Larva somewhat slender, pale purplish-brown; with a subdorsal row of blackish dots, a prominent lateral line, and slight sublateral streaks; head with some black marks. Pupa red. Cocoon broad, oval; surface granular, pale brown.

ORTHAGA JUCUNDALIS.

Bleptina jucundalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1164 (1865), ♂.

Male. Forewing dark olivaceous ochreous-yellow, the medial area whitish-ochreous; black speckled; crossed by ill-defined black-speckled erect antemedial and undulated postmedial denticulated lines; some black streaks at base of the costa; a marginal row of brown spots; a tuft of raised scales at end of the cell: hindwing cinereous-ochreous; with a marginal row of brown spots. Cilia whitish, alternated with black. Body, head, palpi, and legs yellow; tip of palpi, forelegs, and tarsi banded with black; abdomen with blackish-speckled bands.

Expanse $\frac{8}{10}$ inch.

Genus STEMMATOPHORA.

Stemmatophora, Guénee, Delt. et Pyr. p. 129 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 278 (1859); Lederer, Pyr. Wien. Ent. Mon. vii. p. 337 (1863).

"Wings elongated, narrow: forewing straight along the costa, apex obtuse, exterior border quadrate. Body slender; palpi straight, squamous, not long, joints indistinct, third joint very short; maxillary palpi hardly visible; antennæ in male pubescent or furnished with equal ciliæ; legs smooth."

Type, S. exustalis.

STEMMATOPHORA VIBICALIS.

Stemmatophora vibicalis, Lederer, Pyr. Wien. Ent. Monats. vii. pp. 338, 457, pl. 7. fig. 4 (1863), ♀.

Forewing ferruginous-brown, minutely black speckled; crossed by an outwardly-oblique antemedial pale-bordered black-speckled waved line, and an inwardly-oblique undulated similar postmedial line; a black lunate spot at end of the cell: hindwing and abdomen cinereous-ferruginous; crossed by a very indistinct pale discal waved line. Thorax, head, palpi, and legs ferruginous-brown.

Expanse, ♀ 1 inch.

STEMMATOPHORA VULSALIS.

Botys Vulsalis, Walker, Catal. Lep. Het. B. M. xviii. p. 671 (1859), ♀.

Female. Purple-brown: forewing crossed by an indistinct yellowish bordered brown curved wavy antemedial line, and a recurved denticulated postmedial line; some yellow and black points on the costa between the lines; a marginal black lunular line: hindwing yellowish-brown, exterior border purplish-brown; with a transverse discal brown line. Tip of palpi, and fore tarsi, black; middle tarsi white; hind tarsi with pale bands.

Expanse, ♀ $\frac{7}{10}$ inch.

STEMMATOPHORA CASTANOPTERA (Plate 178, Fig. 7, ♂).

Forewing dark chestnut-brown, sparsely speckled with minute black scales;

crossed by an inwardly-oblique medial prominent whitish line, which ends below the costa; followed by a less distinct waved discal line: hindwing paler, and of a duller brown colour; with a very indistinct pale discal waved line. Cilia broad, with pale inner line. Body chestnut-brown; palpi fuliginous-brown.

Expanse, ♂ $\frac{7}{10}$, ♀ $\frac{9}{10}$ inch.

Genus HERCULIA.

Herculia, Walker, Catal. Lep. Het. B. M. xix. p. 807 (1859).

Forewing comparatively shorter, broader, and more triangular in form than in Stemmatophora; cell nearly half the length; first subcostal emitted at one-fifth before end of the cell, second free, third from the end of the cell, trifid; discocellular deeply concave, upper radial from end of the cell in a line with subcostal, lower radial and upper median on a footstalk beyond the cell, middle median from close to end of the cell, lower at one-fourth; submedian recurved: hindwing broad, triangular, apex obtusely pointed, exterior margin oblique, convex; cell about one-third the length, at its upper end and fully half the length at its lower end; discocellular deeply concave anteriorly, its lower end very long and oblique; two subcostals from immediately beyond the cell and free from the costal; radial and upper median from extended lower end of the cell, middle median close to the end, lower at one-third; a straight submedian and two internal veins. Body robust; frontal tuft flat and projected; abdomen tufted at the apex; labial palpi recurved, obliquely ascending, porrect at the tip and forming a snout in front, laxly squamous beneath, second joint broad at the end, third joint narrow, pointed, very short; maxillary palpi short, slender; antennæ finely bipectinated in male, simple in female; legs moderately short, tibiæ slightly pilose, spurs short.

Type, H. bractealis.

HERCULIA BRACTEALIS.

Herculia bractealis, Walker, Catal. Lep. Het. B. M. xix. p. 808 (1859), ♀.

Deep red, with a glaucescent tinge. Wings slightly speckled with minute black scales; crossed by an antemedial and a postmedial rather broad black-speckled line; both lines more approximate on the hindwing: forewing with an indistinct black-speckled spot at end of the cell, and in the male the middle area between the lines is more densely black speckled; some yellow points on middle of the costa. Cilia golden-yellow. Middle tarsi yellow; hindlegs yellow, with red bands.

Expanse, ♂ $\frac{9}{10}$, ♀ $1\frac{2}{10}$ inch.

HERCULIA IGNIFLUALIS.

Pyralis ignifluialis, Walker, Catal. Lep. Het. B. M. xvii. p. 268 (1859).

Female. Olivaceous-red: forewing darker red along the costal border and exterior margin; crossed by an antemedial and postmedial wavy very indistinct pale

bordered brown line; both lines with a slightly dilated pale yellow costal end, and between the lines are some small yellowish costal points; an indistinct blackish spot at end of the cell: hindwing more uniformly red, and crossed by two very indistinct wavy brown lines. Cilia golden-yellow, with a reddish inner line. Front of head, palpi, and forelegs reddish; middle and hindlegs ochreous.

Expanse 1 inch.

Genus PYRALIS.

Pyralis, Linnæus, Syst. Nat. i. p. 533 (1758); Poda, Ins. Mus. Græcensis, p. 94 (1761); Linn. Syst. Nat. i. p. 881 (1767); Stephens, Catal. Brit. Ins. ii. p. 160; Ill. Haust. iv. p. 24 (1834); Catal. Brit. Lep. B. M. p. 235 (1850); Walker, Catal. Lep. Het. B. M. xvii. p. 260; Guénee, Delt. et Pyr. p. 116.

Hypsopygia, Hübner, Verz. bek. Schmett. p. 348 (1825-7).

Asopia, Treitschke, Schmett. Eur. vi. pt. 2, p. 316 (1828); vii. p. 146 (1829); Curtis, Guide, p. 177; Lederer, Pyr. Wien. Ent. Mon. vii. p. 342.

Forewing rather long and narrow, apex not acute, exterior margin oblique, cilia broad; cell extending more than half the length; first subcostal emitted at one-fourth before end of the cell, second about one-eighth, free, third from end, trifid; discocellular slender, concave, radial from upper end in a line with the subcostal; lower radial and upper median on a footstalk one-fifth beyond the cell, middle median from close to the end, lower at one-fifth before the end; submedian almost straight: hindwing rather long and broad, apex convex, exterior margin very oblique; two subcostals from end of the cell; discocellular concave, outwardly oblique, lower end extended; radial and upper median from extended lower end of the cell, middle median from close to the end, lower at one-third; submedian and two internal veins slightly curved. Body moderately stout; labial palpi pubescent, obliquely ascending, not rising above the vertex, second joint slightly curved, third joint short, conical at tip; maxillary palpi very short, slender; antennæ stout, pubescent in the male, bare in the female; legs stout, squamous, tibiæ slightly pilose, spurs long, slender.

Type, P. farinalis.

PYRALIS BRACTIATELLA (Plate 178, Fig. 5, ♀).

Myelois bractiatella, Walker, Catal. Lep. Het. B. M. xxvii. p. 36 (1863).

Purplish-cinereous. Forewing purplish towards the apex; crossed by an antemedial and a postmedial erect wavy white line, the latter externally bordered by a red fascia; between the antemedial line and the extreme base the area is black; at end of the cell is a black dot, and on the costa between the lines are some alternate brown and white spots: hindwing duller coloured; crossed by two similar waved lines, the basal area also being black, the discal area reddish, and the outer border margined with blackish speckled spots. Legs with brownish bands.

Expanse $\frac{8}{10}$ inch.

PYRALIS GERONTESALIS (Plate 178, Fig. 6, ♀).

Pyralis Gerontesalis, Walker, Catal. Lep. Het. B. M. xix. p. 896 (1859).
Sacatia lantatella, Walker, Catal. Lep. Het. B. M. xxvii. p. 124 (1863), ♂.
Pyralis despectalis, Walker, *id.* xxxiv. p. 1243 (1865).
Pyralis miseralis, Walker, *id.* xxxiv. p. 1244 (1865).

Pale vinous brownish-cinereous; black speckled. Both wings crossed by an antemedial and a postmedial angulated black-speckled duplex band, and a marginal row of black spots. Forewing with a black-speckled spot at end of the cell. Cilia very broad, with a blackish inner line. Body and palpi black speckled; legs brownish-cinereous, forelegs with blackish bands.

Expanse, ♂ $\frac{8}{10}$, ♀ 1 inch.

PYRALIS JANIUSALIS.

Pyralis Janiusalis, Walker, Catal. Lep. Het. B. M. xix. p. 904 (1859).

"Forewings very acute. Cinereous-brown, more cinereous beneath. Wings with dark brown, indistinct, slightly undulating lines; marginal line pale testaceous; fringe interlined.

"Expanse 10 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

PYRALIS PALESALIS.

Pyralis Palesalis, Walker, Catal. Lep. Het. B. M. xvii. p. 269 (1859).

"Male. Reddish-cinereous. Forewings coarsely squamous, slightly speckled with black; two irregular oblique whitish-yellow bands slightly and diffusedly bordered with blackish; first band dilated along the costa; second abbreviated in front, accompanied hindward by a zigzag line of the same colour; marginal lunules blackish; a blackish point in the first band, and a blackish dot between the latter and base of the wing: hindwings more cinereous, with two paler lines.

"Expanse 12 lines."

PYRALIS RAVOLALIS.

Pyralis Ravolalis, Walker, Catal. Lep. Het. B. M. xix. p. 898 (1859).

Female. Purplish-cinereous. Forewing purplish towards the apex; crossed by an outwardly-oblique wavy pale-bordered brown antemedial and a postmedial line, the latter line ending at the posterior angle; the basal area darker cinereous, and marked by a costal black spot, a black spot also at end of the cell: hindwing duller coloured; crossed by two similar very undulated pale lines, which are bordered with blackish-ferruginous speckles, which are clustered at the ends. Cilia purplish-red, with a pale inner line and row of blackish spots. Body speckled with ferruginous-black.

Expanse $\frac{8}{10}$ inch.

PYRALIS TORRIDALIS.

Asopia torridalis, Lederer, Pyral. Wien. Ent. Monat. vii. pp. 342, 457, pl. 6, fig. 15 (1863).

Male. Dull reddish. Forewing crossed by a black outwardly-curved antemedial line, an inwardly-oblique pale-bordered denticulated postmedial line, and a marginal row of dentate spots; a blackish spot at end of the cell, and some pale-bordered points on the costa: hindwing with a slender indistinct black inner line, a more distinct discal waved line, and marginal dentate spots; antennæ finely pectinated.

Expanse $1\frac{1}{8}$ inch.

PYRALIS IMBECILIS.

Female. Pale cinereous-ochreous: forewing brownish-ochreous along the costal edge; crossed by a very indistinct pale ochreous curved antemedial line, and a straight almost erect postmedial line: hindwing with a pale ochreous wavy discal line. Palpi and forelegs brownish-ochreous.

Expanse $\frac{9}{10}$ inch.

Allied to the European *P. glaucinalis*, Linn.

Genus BOSTRA.

Bostra, Walker, Catal. Lep. Het. B. M. xxvii. p. 123 (1863).

"Female. Wings short, rather broad: forewing acute, costa straight, exterior margin convex, very oblique hindward. Body thick; palpi porrect, lanceolate, third joint conical, minute; antennæ slender; abdomen lanceolate; legs rather long and slender, smooth, spurs moderately long."

BOSTRA ILLUSELLA.

Bostra illusella, Walker, Catal. Lep. Het. B. M. xxvii. p. 123 (1863).

"Female. Brownish-cinereous: forewing with a pale fawn-coloured band, bounded by an oblique whitish line, followed by a whitish submarginal undulating line. Head, palpi, and legs pale fawn colour.

"Expanse $\frac{5}{10}$ inch."

Genus ENDOTRICHA.

Endotricha, Zeller, Isis, 1847, p. 592; H. Schæffer, Eur. Schmett. iv. p. 12; Guénee, Delt. et Pyr. p. 218 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 388; Lederer, Pyral. Wien. Ent. Mon. vii. p. 344.

Forewing rather long, costa somewhat arched towards the end, apex subfalcate, exterior margin slightly convex; cell three-fifths the length; first subcostal emitted at one-sixth before end of the cell, third from end, trifid; discocellular concave, upper radial from end in a line with subcostal, lower radial and upper median on a footstalk beyond end of the cell, middle median from end of cell, lower at one-fourth;

submedian widely separated from median: hindwing short, exterior margin convex in the middle; cell two-fifths the length; two subcostals from end of cell, upper extending partly along the costal; discocellular very obliquely concave, radial and upper median from its extended lower end, lower median at two-fifths. Body slender; tegulæ divergent, hairs long; front of head smooth, flat; palpi slightly ascending, slender, short, third joint obtuse; antennæ submoniliform; legs long, bare, spurs slender.

Type, E. flammealis.

ENDOTRICHA DECESSALIS.

Endotricha decessalis, Walker, Catal. Lep. Het. B. M. xvii. p. 390 (1859).
Pyralis decessalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1234 (1865).

Red. Forewing ferruginous-red towards the base; crossed by a wavy antemedial indistinct brown line, and a submarginal slightly-curved line; a slight blackish lunular spot at end of the cell, and alternate yellowish and black points along the costa: hindwing crossed by an indistinct antemedial and postmedial waved pale line. Cilia white. Legs with blackish bands.

Expanse $\frac{8}{10}$ inch.

Genus DOTHTHA.

Doththa, Walker, Catal. Lep. Het. B. M. xvii. p. 285 (1859).

Male. Forewing elongate, triangular, costa somewhat raised and angulated at one-third before its end, apex acute, exterior margin slightly oblique; cell narrow, more than half the length; first subcostal at one-fourth, second free, third trifid; discocellular concave, radial from upper end in a line with the subcostal; two upper medians (or lower radial and upper median) on a footstalk half beyond the cell, middle median from end of the cell, lower from close to the end, and its entire length covered on the underside with a lappet of scales; submedian nearly straight: hindwing narrow, apex and exterior margin very convex; cell two-fifths the length; two subcostals from end of cell, upper joining the costal for half its length; discocellular outwardly oblique, concave; the radial and upper median on a footstalk half beyond the cell, middle median from end of the cell, lower at one-third. Body slender; head depressed between the antennæ; abdomen tufted at apex; labial palpi short, vertical, applied close to the head, laxly squamous in front; maxillary palpi not visible; antennæ minutely serrated and pectinated, basal joint with an appendage at its tip; tegulæ of thorax long, lax, spatular; legs slender, rather long, spurs long.

Type, D. mesenterialis.

DOTHTHA MESENTERIALIS (Plate 178, Fig. 8).

Doththa mesenterialis, Walker, Catal. Lep. Het. B. M. xvii. p. 285 (1859), ♂; *id.* xix. p. 920.

Purplish-red, numerously speckled with black scales, which mostly form short

transverse strigæ. Wings crossed by a medial undulated yellow band, which is broad on the forewing and slender on the hindwing; an indistinct submarginal slender yellowish undulated line; a marginal black-dotted line; some yellow and black points on the costa of forewing. Base of abdomen blackish, tip and anal tuft golden-yellow; legs reddish-brown; tarsi with pale bands. Cilia golden-yellow, with a macular red inner line.

Expanse $\frac{6}{10}$ inch.

DOTHTHA SUFFUSALIS.

Endotricha suffusalis, Walker, Catal. Lep. Het. B. M. xvii. p. 390 (1859), ♀.

Purplish-red, minutely speckled with black scales: forewing with some yellow and black points along the costa, and some black speckles between the outer veins; crossed by an antemedial waved yellow line, which is dilated at the costal end, the costa towards the apex being also yellowish; an indistinct slender black denticulated submarginal and marginal line: hindwing crossed by a slender yellow medial line, an indistinct blackish-speckled discal fascia, and a slender black marginal line. Cilia yellow, with an inner red macular line. Legs with yellowish bands; tip of abdomen yellow.

Expanse, ♂ $\frac{6}{10}$, ♀ $\frac{7}{10}$ inch.

Genus AGLOSSA.

Aglossa, Latrielle, Hist. Nat. Gen. Crust. et Ins. iii. p. 414 (1802); *id.* xiv. p. 229 (1805); Lamarck, Hist. Nat. Anim. iii. p. 557 (1816); Stephens, Illust. Haust. iv. p. 22; Guénee, Delt. et Pyr. p. 125; Walker, Catal. Lep. Het. B. M. xvii. p. 274.

Male. Forewing rather long, moderately broad; cell long, extending nearly three-fifths the length; first subcostal emitted at one-fourth before end of the cell, second free, third trifid; discocellular concave, radials from extreme upper and lower ends; middle median from near end of the cell, lower at two-fifths; submedian recurved: hindwing moderately broad, exterior margin convex; cell two-fifths the length; two subcostals from beyond end of the cell, free from the costal; discocellular bent in the middle, radial and upper median from extended lower end of the cell; middle median close to the end, lower at one-third. Body moderately stout, head flat in front; labial palpi porrect, projected much beyond the head, second joint stout, coarsely pilose beneath, third joint short, lanceolate; maxillary palpi small, slender, porrect; antennæ finely bipectinated; legs long, stout, tibiæ very slightly pilose above; spurs stout.

Type, A. pinguinalis.

AGLOSSA GNIDUSALIS.

Aglossa Gnidusalis, Walker, Catal. Lep. Het. B. M. xvii. p. 278 (1859).

"Female. Cinereous. Wings with the interior and exterior lines denticulated, pale, with dark inner border; submarginal line composed of black points. Fore-

wings dark, and with pale points along part of the costa; reniform mark blackish, a pale streak.

"Expanse 10 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus RHODONEURA.

Rhodoneura, Guénee, Phalænites, ii. Siculidæ, pl. 1, fig. 8 (1857).
Osca, Walker, Journ. Linn. Soc. Zool. vii. p. 73 (1864).

Wings smooth. Forewing rather long, triangular; costa arched towards end, apex very acute, exterior margin very oblique; cell more than half the length; first subcostal emitted at nearly half before end of the cell, second, third, and fourth from near the end, each free, fifth from the end; discocellular erect, acutely bent near the ends, slightly concave in middle, radials from the angles; middle median at one-fifth and lower at fully half before end of cell; submedian much curved downward from the base and with a short lower branch: hindwing short, triangular; cell short, less than one-third the length, broad; first subcostal from before end of cell, free from costal; discocellular bent inward in the middle, radial from near lower end; middle median close to end, lower at one-third; submedian and internal vein curved. Body rather stout, smooth; labial palpi curved, slender, smooth, rather long, third joint two-thirds the length of second; antennæ thick, smooth; legs broad; femora smooth, tibiæ flat, pilose on outer side; tarsi long, spurs long, stout, unequal in length.

Type, R. pudicalis.

RHODONEURA DENTICULOSA.

Cinereous-white; silky: forewing with the costal border blotched with cinereous-black; crossed by several ill-defined inwardly-oblique denticulated cinereous-black lines, which are partly confluent on the posterior margin, and an apical marginal row of black spots: hindwing with similar coloured denticulated bands, and apical marginal row of black spots. Cilia alternated with cinereous-black. Body, palpi, fore and middle legs, and hind tarsi with cinereous-black bands.

Expanse $\frac{8}{10}$ inch.

Allied to *R. marmorealis* and *R. bastialis*.

Genus MICROSCA.

Microsca, Butler, Types Lep. Het. B. M. iii. p. 71 (1879).

"Allied to Osca. Palpi less porrect, and with shorter terminal joint; spines of hind tibiæ longer. Forewings with the outer margin more or less convex."

Type, M. hedilalis (*Pyralis hedilalis*, Walker).

MICROSCA TRIMERONALIS.

Pyralis Trimeronalis, Walker, Catal. Lep. Het. B. M. xix. p. 916 (1859).

Yellowish-ochreous. Both wings covered with numerous brownish-ochreous continuous strigæ; marginal line brown. Body yellowish-ochreous; front of thorax, head, palpi, and legs brownish-ochreous; outer spurs and bands on tarsi blackish.

Expanse $\frac{6}{10}$ inch.

Genus SYLLYTHRIA.

Syllythria, Hübner, Verz. bek. Schmett, p. 349 (1825-7).

Ostrinis, Hübner, *id.* p. 360 (1825-7).

Rhodaria, Guénee, Delt. et Pyr. p. 168 (1854); Duponchel, Catal. Lep. Eur. p. 199; Walker, Catal. Lep. Het. B. M. xvii. p. 312.

Botys (part), Lederer, Pyr. Wien. Ent. Monat. vii. p. 364 (1863).

Wings small: forewing rather short and broad, triangular; cell very long, extending fully two-thirds the length; first subcostal emitted at one-fourth, second and third from angles close to end, third bifid, fifth from end of the cell; discocellular concave, radials from near the ends; middle median from angle near end of cell, lower at one-third; submedian straight: hindwing comparatively long, exterior margin slightly convex; cell two-fifths the length at its upper end and three-fifths at its lower end; subcostals from end of cell, upper branch partly joined to the costal; discocellular very oblique, bent inward near upper end, radial and two upper medians approximate at their base at end of the cell, lower median at one-third. Body slender; labial palpi porrect, projecting more than half beyond the eyes, compressed, broad, laxly clothed with coarse scales, third joint short, acute; maxillary palpi ascending, slender, pubescent; antennæ minutely ciliated; legs slender, bare, spurs moderately long.

Type, S. sanguinalis, Linn.

SYLLYTHRIA IMBUTALIS (Plate 178, Fig. 9).

Rhodaria imbutalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1283 (1865).

Forewing purplish-red, with a few black speckles on the costal edge, and a marginal slender black lunular line: hindwing pale gilded yellow. Thorax, head, tip of palpi, and forelegs red; palpi and abdomen yellow; middle and hindlegs yellowish-white; tibiæ slightly red above.

Expanse $\frac{7}{10}$ inch.

Genus HELIOTHELA.

Heliothela, Guénee, Delt. et Pyral. p. 152 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 298; Lederer, Pyral. Wien. Ent. Monat. vii. p. 352.

Perilypa (part), Hübner, Verz. bek. Schmett. p. 372 (1825-7).

Orosana, Walker, Catal. Lep. Het. B. M. xxviii. p. 458 (1863).

Nyctarcha, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 344.

Wings small; cilia very broad: forewing rather narrow; cell more than half the

length; first subcostal emitted at one-fourth before end of the cell, second and third well separated, third bifid, fifth from end; discocellular bent near each end, radials from the angles; middle median close to end, lower at one-fifth; submedian recurved from the base: hindwing broad; cell two-fifths the length; subcostals from the end; discocellular concave, radial from lower end; two upper medians from end of cell, lower at one-fifth. Body rather stout, abdomen not extending beyond hindwing, keeled above; labial palpi porrect, extending half beyond the head, second joint with dense projecting decumbent scales at the apex, third joint exposed, somewhat expanded with scales and truncate at the tip; maxillary palpi obliquely ascending, expanded with scales and truncate at the tip; antennæ filiform; legs rather short, squamous, spurs nearly equal.

Type, H. atralis.

HELIOTHELA OPHIDERESANA.

Orosona Ophideresana, Walker, Catal. Lep. Het. B. M. xxviii. p. 459 (1863).
Nyctarcha Ophideres, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 345.

Dark cupreous-brown: forewing crossed by an indistinct black antemedial and a postmedial irregular line, the latter curved inward below end of the cell and bordered on its upper inner half by an ochreous-whitish band; a submarginal series of indistinct minute whitish dots; an indistinct black spot in the cell and another at its end: hindwing with the basal area and a discal spot bright orange-yellow. Cilia dark grey, with a broad blackish inner line; abdominal segments margined with ochreous-white; palpi white beneath; tibia and tarsi with white bands.

Expanse $\frac{4}{10}$ to $\frac{5}{10}$ inch.

Hab. Colombo.

Genus PELECYNTIS.

Pelecyntis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 315.

Male. Forewing narrow, triangular; cell half the length; first subcostal emitted at two-fifths before end of the cell, third bifid, fifth from end; discocellular erect, hardly concave, radials from close to each end; two upper medians from end of cell, lower at one-fourth: hindwing short, rather narrow, triangular, exterior margin waved; cell one-third the length, broad; subcostals from end of cell; discocellular slightly concave, radial from lower end; two upper medians from end of cell, lower at one-fourth. Body slender, tegulæ with very long lax hairy scales; anal tuft dense; labial palpi short, oblique, laterally broad, pilose in front, second joint truncate, third joint short, obtusely conical; maxillary palpi distinct, oblique; antennæ setaceous; legs long, smooth, spurs of unequal length.

Type, P. absistalis.

PELECYNTIS ABSISTALIS.

Pyrausta absistalis, Walker, Catal. Lep. Het. B. M. xvii. p. 311 (1859).
Asopia Lydialis, Walker, Catal. Lep. Het. B. M. xvii. p. 374 (1859).
Botys ustalis, Lederer, Pyr. Wien. Ent. Monat. vii. pp. 375, 471, pl. x. fig. 14 (1863).
Hedylepta ustalis, Snellen, Tijd. voor Ent. 1884, p. 37.
Hedylepta pyraustalis, Snellen, Midd. Sumatra, Lep. p. 71 (1880).
Pelecyntis abstitalis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 316.

Golden-yellow: forewing crossed by a diffused blackish cupreous-brown basal, antemedial, and a postmedial sinuous line, and a broad marginal partly confluent band; the middle area from below the costal border also more or less suffused with brown; a distinct brown spot in middle of the cell, and another at the end: hindwing with a similar broad brown marginal band, and a zigzag middle band. Cilia cinereous-white, with a brown inner line. Thorax and abdomen brown speckled, darkest in the female; abdomen with slender white bands; tegulæ tipt with brown; palpi and fore tibiæ with a brown band.

Expanse $\frac{7}{10}$ inch.

PELECYNTIS AMYNTUSALIS (Plate 178, Fig. 12, ♂).

Botys Amyntusalis, Walker, Catal. Lep. Het. B. M. xviii. p. 662 (1859).
Asopia Critheisalis, Walker, Catal. Lep. Het. B. M. xix. p. 939 (1859).
Botys semizebralis, Walker, *id.* xxxiv. p. 1407 (1865).

Pale straw-yellow, brightest in the female: forewing crossed by an outwardly-curved antemedial purplish cinereous-brown line, a medial line which is joined to a quadrate mark at end of the cell, and an angulated postmedial line, confluent with which is a similar coloured apical and posterior marginal patch, a brown dot in middle of the cell, some basal costal streaks and a dot near base of posterior margin: hindwing crossed by a similar brown inner line which is joined to a mark at end of the cell; an angulated discal line, and an apical and subanal patched marginal band. Cilia whitish, with a slender brown inner line. Spots on thorax and tuft on abdomen brown; palpi tipt with brown; fore tibiæ with a brown band.

Expanse $\frac{7}{10}$ to $\frac{8}{10}$ inch.

PELECYNTIS DISTORTA (Plate 180, Fig. 7).

Æneseent yellow: forewing with two æneseent purplish-brown transverse sub-basal zigzag streaks, a curved antemedial broad line, and a distorted angular post-medial broad line, the latter curved inward to below the cell and there confluent with a large reniform mark, which almost touches the costa; a broad æneseent purplish-brown marginal band extends from the postmedial line enclosing a yellow streak before the apex, this band also running along the posterior margin to the antemedial line: hindwing with an æneseent-brown mark at end of cell, from which descends a

straight line, beyond which is a distorted discal line, and a broad apical and an anal brown patch. Cilia with a brown inner line. Body with brown bands; anal tuft brown; palpi above and band on fore tibiæ brown.

Expanse $1\frac{1}{10}$ inch.

Genus CHNAURA.

Chnaura, Lederer, Pyral. Wien. Ent. Monat. vii. p. 435 (1863).
Syngamia (part), Walker, Catal. Lep. Het. B. M. xvii. p. 333 (1859).

Forewing long, narrow, triangular; apex pointed, exterior margin very oblique, somewhat angular in the middle; cell half the length; first subcostal emitted at one-fifth before end of the cell, second, third, and fifth from the end, third bifid; discocellular concave, radials from near upper end and extreme lower end; two upper medians from end of the cell, lower at one-fifth; submedian slightly undulated: hindwing short, exterior margin very oblique, somewhat angular in the middle; cell one-third the length; two subcostals from end, upper extending partly along the costal; discocellular concave, radial from lower end; two upper medians from end of the cell, lower at one-fourth. Body moderately slender; abdomen keeled above, apex pointed; labial palpi porrect, of uniform lateral width throughout its length; very laxly squamous beneath, extending half beyond the eyes, truncate at the apex; maxillary palpi slender, porrect; antennæ slender, submoniliform, setose; legs smooth; spurs long, slender.

Type, C. Octavialis.

CHNAURA OCTAVIALIS.

Syngamia Octavialis, Walker, Catal. Lep. Het. B. M. xvii. p. 334 (1859), ♂.
Chnaura Octavialis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 435, pl. 17, fig. 4 (1863).

Wings yellow; the base bright red: forewing with a purple-brown basal costal streak, a transverse antemedial line, a postmedial band which is dilated hindward, extends up the outer margin, and encloses a large yellow upper discal spot: hindwing with an excavated purple-brown marginal band, and a blackish spot at end of the cell. Body yellow; collar on front of thorax, a band at base of abdomen, and the apical segments iridescent purple-brown; the basal band bordered below with red; palpi tipt with purple-brown; palpi beneath and legs yellow.

Expanse $\frac{5}{8}$ inch.

Genus BOCCHORIS.

Male. Forewing narrow, somewhat triangular; cell more than half the length; first subcostal emitted at one-sixth before end of the cell, second free, third bifid, fifth from end of the cell; discocellular slightly oblique and concave, radials from near the ends; two upper medians from end of cell, lower at one-sixth: hindwing short, exterior margin oblique, undulated; cell two-fifths the length; subcostals from end of the cell; discocellular very slender; radial from lower end; two upper

medians from end of cell, lower at one-fourth. Body moderately stout; palpi obliquely porrect, projecting half beyond the head, compressed, laterally broad, compactly squamous, tip broad, truncate; antennæ finely ciliated; legs long, smooth, tibiæ rather thick, spurs slender, unequal in length.

Type, B. inspersalis.

BOCCHORIS INSPERSALIS.

Botys inspersalis, Zeller, Lep. Microp. Caffr. Kongl. Vet. Akad. Handl. 1852, p. 33.

Ædiodes inspersalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 434 (1863).

Desmia afflictalis, Guénee, Delt. et Pyral. p. 190, pl. 5, fig. 4 (1854); Walker, Catal. Lep. Het. B. M. vii. p. 344 (1859).

Ædiodes bootanalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1298 (1865).

Cupreous-black: forewing with a pure white subbasal dot below the cell, a spot near end of the cell, a larger spot beyond, contiguous to which is a small dot below it and a costal spot above it: hindwing with a pure white basal spot, a similar sized discal spot, a small spot between it and the outer margin, and a short streak above anal angle. Cilia of both wings pure white at the anterior and posterior ends. A white band across base of thorax, and a slender band on the abdomen; base of palpi, pectus, and bands on legs white.

Expanse $\frac{6}{8}$ inch.

Genus DANAGA.

Male. Wings short: forewing rather broad; cell extending half the length; first subcostal emitted close to end of the cell, second trifid, fifth from end; discocellular concave, outwardly oblique, radials from near the ends; two upper medians from end of cell, lower at one-fourth: hindwing somewhat quadrate, apex convex, exterior margin convexly angular in the middle; cell one-third the length at its upper end, and half the length at its lower end; subcostals from end of cell; discocellular very oblique, slightly concave, radial and two upper medians from end of the cell, lower median at one-fourth. Body moderately stout; labial palpi small, obliquely ascending, smoothly squamous, not reaching the vertex, third joint smooth, short, pointed; maxillary palpi ascending, short; antennæ in the male thick, coarsely serrated and finely pectinated, bent at one-third from the base, thickened and tufted at two-thirds its length; antennæ slender and simple in the female; legs very long, slender, spurs long, equal in length.

Type, D. concisalis.

DANAGA CONCISALIS (PLATE 179, FIG. 3, ♂).

Desmia concisalis, Walker, Catal. Lep. Het. B. M. xvii. p. 345 (1859).

Dark purplish-brown: forewing partly yellowish along the costa; crossed by an indistinct antemedial and a postmedial black undulated denticulated line, both lines

partly, but indistinctly yellow-bordered, the yellow colour being most distinct at the costal end; a more distinct yellow quadrate spot at end of the cell: hindwing with a discal wavy indistinct blackish yellow-bordered line, and a yellow spot at end of the cell. Cilia brown, edged with cinereous-white, and with a yellow spot at the apex and near posterior angle.

Expanse, ♂ $\frac{5}{10}$, ♀ $\frac{6}{10}$ inch.

Genus NACOLEIA.

Nacoleia, Walker, Catal. Lep. Het. B. M. xviii. p. 934 (1859).
Semioceros, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 318.

"Wings elongate, rather narrow. Forewings subfalcate: hindwing with the exterior border slightly bent. Body slender; labial palpi short, porrect, third joint conical, minute; antennæ stout, very minutely serrated, angular in the middle, slightly incrassated near the tips, which are convoluted; abdomen extending beyond hindwings, somewhat tumid towards the tip; legs slender, smooth, spurs long."

Type, N. murcusalis.

NACOLEIA PRÆTERITALIS.

Asopia præteritalis, Walker, Catal. Lep. Het. B. M. xvii. p. 372 (1859).

Male. Pale yellow, densely clouded with cinereous-brown speckles; crossed by an antemedial and a postmedial indistinct blackish denticulated line, the latter undulated; a blackish lunular mark at end of the cell, and a darker mark in the middle; some yellow and blackish dentate points on the costa. Body brown speckled; abdomen with a blackish band at the base and tip; forelegs with brown bands.

Expanse $\frac{5}{10}$ inch.

NACOLEIA COSTISIGNALIS.

Male and female. Forewing yellowish-ochreous; whitish about the middle; crossed by an erect antemedial, and an inwardly-oblique irregular postmedial whitish-bordered black-speckled denticulated rather broad line; both lines dilated at the costal end; a slight marginal dentated line; an oval black mark on middle of the costa; basal area with black-speckled patches, the lower medial area and the marginal area also black speckled: hindwing yellowish-white, ochreous externally; some black-speckles at the base, a small streak at end of the cell, a lower discal fascia, an irregular broad outer discal line, and a marginal line, the two latter with intervening black speckles below the apex. Cilia with a slender inner black line. Thorax and abdomen, fore and middle legs, with black bands.

Expanse, ♂ $\frac{7}{10}$, ♀ $\frac{9}{10}$ inch.

NACOLEIA CONTINGENS (Plate 179, Fig. 8, ♂).

Glossy ænescent-yellow: forewing crossed by an inwardly-oblique basal, an

incomplete subbasal, a medial, and an undulated discal slender blackish band, followed by an irregular marginal band which is broadest below the apex and at the posterior angle; a black-lined orbicular mark in middle of the cell, and a reniform mark at its end, both being joined at their lower end by the discal band: hindwing crossed by a blackish medial, and an undulated discal band, followed by a marginal band which is broadest at the apex and at the anal angle. Cilia with a blackish inner line. A black band across the thorax, on segments of abdomen, and on anterior tibiæ. Antennæ in male bent at one-third from the base, and tufted at two-thirds its length, shaft slightly serrated and very finely pectinated.

Expanse, ♂ $\frac{6}{12}$, ♀ $\frac{7}{12}$ inch.

NACOLEIA TIASALIS.

Botys Tiasalis, Walker, Catal. Lep. Het. B. M. xix. p. 994 (1859).

Ochreous. Wings brown speckled: forewing with a transverse brown-speckled basal mark, an antemedial line, and an irregular discal line, the latter curved inward to below the cell, followed by marginal points; a brown-speckled orbicular and a reniform mark. Palpi and legs with brown bands.

Expanse $\frac{5}{10}$ inch.

Genus SAMEA.

Samea, Guénee, Delt. et Pyral. p. 193 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 349 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 378.

Forewing elongated, rather narrow, triangular, apex acute, subfalcate; exterior margin very oblique; cell three-fifths the length; first subcostal emitted at one-fifth before end of the cell, second trifid, fifth from the end; discocellular concave, radials from close to each end; middle median from close to end of cell, lower at one-fifth; submedian recurved: hindwing rather narrow, apex produced, acute, exterior margin very oblique, undulated; cell broad, about half the length; subcostals from the end, upper branch extending half its length along the costal; discocellular concave, radial from extreme lower end; middle median close to end, lower at one-third. Body rather slender; abdomen of male furnished with a curled tuft of hairs on each side towards the apex; labial palpi short, oblique, laxly squamous, third joint very short, truncated; maxillary palpi minute; antennæ pubescent in male; legs slender, smooth, spurs long.

Type, S. Ecclesialis.

SAMEA GRATIOSALIS.

Samea gratiosalis, Walker, Catal. Lep. Het. B. M. xvii. p. 357 (1859), ♂.

Male. Yellow, irregularly speckled and clouded with crimson: forewing with a short medial and discal irregular macular vitreous-white band, and a small similar

spot at end of the cell: hindwing with a short upper subbasal and a discal vitreous-white band. Tip of palpi and bands on legs brown.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

SAMEA RORIDALIS.

Samea roridalis, Walker, Catal. Lep. Het. B. M. xvii. p. 371 (1859), ♂.

Male. Yellow, slightly clouded and speckled with crimson: forewing with a crimson-bordered spot at end of the cell, one at its end, a round spot below end of the cell, and a short discal narrow crimson-bordered macular band: hindwing with medial and discal crimson marks. Forelegs with brown bands.

Expanse $\frac{9}{10}$ inch.

This species is very similar to the preceding, but the markings on both wings are not vitreous-white.

SAMEA RHODOPHILALIS (Plate 178, Fig. 13, ♀).

Endotricha rhodophilalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1311 (1865).
Botys amœnalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1445 (1865).
Samea dives, Butler, Proc. Zool. Soc. 1880, p. 682.

Bright yellow. Wings slightly speckled with ochreous and rosy-red at the base; crossed by an antemedial and two postmedial undulated black-speckled lines: forewing with a rosy-red patch descending obliquely from middle of the costa to lower end of the postmedial line and is thence joined to a rosy-red streaked band, which outwardly ascends the exterior line to the costa: hindwing with a similar rosy-red outer band. Body speckled with ochreous; head brown; palpi brown speckled; legs ochreous-white; forelegs with brown bands.

Expanse $\frac{9}{10}$ inch.

Genus COTACHENA.

Forewing long, very narrow, triangular; cell very short, extending one-third the length only; first subcostal close to end of cell, second trifid, fifth from the end and almost coalescent with third near its base; discocellular oblique, upper radial from its upper end, lower radial and two upper medians from end of cell, lower median close to end of cell; submedian straight, with a slender recurved lower branch: hindwing rather long, triangular; cell one-third the length; two subcostals from the end, upper partly joined to costal; discocellular concave, radial and two upper medians from end of cell, lower median close to the end; a submedian and two internal veins. Body moderately stout, abdomen keeled above, extending beyond hindwings; labial palpi porrect, rostriform, laxly squamous beneath; maxillary palpi oblique, distinct, slender; antennæ with very fine rather broad ciliæ; legs smooth, long, spurs long, slender, unequal.

COTACHENA HISTRICALIS.

Botys histricalis, Walker, Catal. Lep. Het. B. M. xviii. p. 655 (1859).

Ochreous-yellow: forewing with the basal area clouded with ochreous-brown; crossed by a blackish antemedial, and an irregular discal line, the latter curved inward towards lower end of the cell; with four blackish-bordered pure white semi-hyaline spots, the first in middle of cell, second at end of the cell, third at upper end of discal line, the fourth at the lower angle of the discal line near lower end of the cell: hindwing paler yellow; with an undulated ochreous-brown discal line, a curved marginal line, and a slight spot at end of the cell. Thorax and head ochreous-brown; abdomen ochreous-yellow; palpi above dark brown, palpi beneath and legs white; forelegs with brown bands.

Expanse ♂ 1 inch.

Genus HEDYLEPTA.

Hedylepta, Lederer, Pyral. Wien. Ent. Monat. vii. p. 409 (1863).
Asopia, Guénee, Delt. et Pyral. p. 202 (1854)—*nec* Treitschke.

Male. Forewing elongated, narrow, triangular; cell half the length; first subcostal emitted at one-third before end of the cell, second and third from angle close to the end, third bifid, fifth from the end; discocellular concave, radials from close to each end; middle median close to end of the cell, lower at nearly one-third: hindwing elongated at the apex, exterior margin very oblique; cell one-third the length; subcostals from the end; discocellular concave, radial and two upper medians from end of cell; lower median at one-third. Body slender; labial palpi short, thick, extending half beyond the head, pilose, third joint short, conical, indistinct; maxillary palpi distinct, ascending; antennæ minutely pubescent; legs moderately long, smooth, inner spurs very long, slender, outer spurs short.

Type, H. vulgalis.

HEDYLEPTA VULGALIS.

Asopia vulgalis, Guénee, Delt. et Pyral. p. 202, pl. 6, f. 8; Walker, Catal. Lep. Het. B. M. xvii. p. 364.
Hedylepta vulgalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 409 (1863).
Botys mæliusalis, Walker, Catal. Lep. Het. B. M. xviii. p. 703 (1859).
Botys reductalis, Walker, *id.* xxxiv. p. 1412 (1865).

Ochreous-yellow, slightly suffused with purplish-cinereous. Both wings crossed by a slender brown irregular discal line, which is bent inward to below the cell and there touches a brown lunular mark at end of the cell; marginal line brown, which is sometimes slightly macular: forewing also with a brown curved antemedial line, and a dot in middle of the cell. Cilia with a slender brown inner line.

Expanse $\frac{7}{10}$ inch.

HEDYLEPTA ABRUPTALIS (Plate 178, Fig. 14, ♀).

Asopia abruptalis, Walker, Catal. Lep. Het. B. M. xvii. p. 371 (1859).
Botys abruptalis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 323.
Asopia dotatalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1305 (1865).

Gilded-yellow, outer borders darkest: forewing crossed by a blackish curved antemedial line, and an irregularly undulated postmedial line, the latter being deeply curved below end of the cell and there almost touches a black lunular streak; a darker yellow streak at the base: hindwing crossed by two medial blackish wavy lines; marginal line black. Cilia white, with a cinereous-brown inner line. Palpi brown above, white beneath; legs whitish, forelegs with black bands.

Expanse $\frac{6}{10}$ to $\frac{7}{10}$ inch.

HEDYLEPTA LATIMARGINALIS (Plate 178, Fig. 16).

Asopia latimarginalis, Walker, Catal. Lep. Het. B. M. xvii. p. 370 (1859).

Straw-yellow, palest in the male; the outer borders purplish cinereous-ochreous: forewing more or less clouded with purplish cinereous-ochreous at the base; crossed by a slender black curved antemedial line, and a postmedial line bordering the marginal band, the latter line is undulated, curved inward below end of the cell, and there joins a linear streak at end of the cell: hindwing crossed by two medial black lines, the outer line bordering the marginal band. Cilia whitish, with a slender blackish inner line. Abdomen above with slender white and black fringed segmental bands, terminal segments red, subterminal segment with a broader black band, tip in male with two longitudinal white streaks; legs white; forelegs with black bands.

Expanse $\frac{7}{10}$ to $\frac{8}{10}$ inch.

HEDYLEPTA FALSIDICALIS.

Asopia falsidicalis, Walker, Catal. Lep. Het. B. M. xvii. p. 370 (1859), ♀.
Botys jucundalis, Lederer, Pyral. Wien. Ent. Monat. vii. pp. 370, 463, pl. 8, fig. 17 (1863), ♀.

Female. Wings purple-brown, glossy: forewing crossed by a bright yellow-bordered black antemedial curved line, and a postmedial irregular line, the latter line being deeply bent inward below end of the cell, the yellow border being confined broadly to the upper end: hindwing with a medial yellow black-bordered band, which is attenuated to the anal angle. Cilia whitish, with a broad medial black band; legs white; fore and middle tibiæ and tarsi with brownish bands.

Expanse $\frac{9}{10}$ inch.

HEDYLEPTA ILLECTALIS.

Botys illectalis, Walker, Catal. Lep. Het. B. M. xviii. 658 (1859).
Ebulea Opheltesalis, Walker, Catal. Lep. Het. B. M. xix. p. 1010 (1859).

Reddish-ochreous: forewing crossed by a curved black antemedial waved line,

and an irregular discal line, followed by a less distinct curved submarginal line, and a prominent marginal line: hindwing with a similar irregular discal line, a curved submarginal line, and a prominent marginal line. Cilia pure white. Palpi beneath white; legs whitish, fore femora and tibiæ above brown; fore tarsi with brown bands.

Expanse 1 inch.

HEDYLEPTA STRAMINEA (Plate 180, Fig. 5).

Ochreous-yellow: forewing with some indistinct basal reddish-ochreous spots, a transverse outwardly-curved brown antemedial line, and an irregular discal line, the latter bent indistinctly inward to below end of the cell and nearly touches a lunular mark at its end: hindwing with a brown irregular discal line, which is bent indistinctly inward to below end of the cell and touches a slender streak at its end. Cilia cinereous-white, with a blackish inner line. Sides of thorax, front of head, palpi above, and fore tibiæ ochreous; palpi beneath and legs white; tip of abdomen reddish-ochreous and with a black spot.

Expanse $\frac{9}{10}$ inch.

HEDYLEPTA (?) NIOBESALIS.

Asopia Niobesalis, Walker, Catal. Lep. Het. B. M. xix. p. 939 (1859).

"Pale ochraceous. Wings with slight blackish denticulated lines; exterior line much bent; marginal festoon black; fringe white. Forewings subfalcate; reniform mark small, blackish. Palpi porrect, as long as the breadth of the head, third joint lanceolate, nearly as long as the second. Antennæ submoniliform.

"Expanse 6 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus GADESSA.

Forewing moderately long, triangular, exterior margin very oblique; cell more than half the length; first subcostal at one-third before end of the cell; second and third from angle close to end, third bifid; fifth from the end; discocellular concave, radials from near each end; middle median from angle close to end, lower at one-third; submedian with a slender recurved lower branch: hindwing short, broad, triangular; cell one-third the length; two subcostals from the end, upper partly joined to costal near the base; discocellular concave, radial from the lower end; two upper medians from end of cell, lower at one-third; a submedian and two internal veins. Body rather stout, thorax robust, laxly clothed; abdomen long, apex pointed; labial palpi curved, smoothly scaled, of equal width to near the tip, third joint short, bluntly pointed; maxillary palpi short, slender; antennæ long,

slender, very minutely ciliated; legs long, rather stout, fore and middle tibiæ clothed with short hairy scales, spurs long, unequal.

GADESSA ALBIFRONS (Plate 180, Fig. 6).

Pale cinereous-ochreous. Wings opalescent: forewing crossed by a blackish curved outwardly-oblique antemedial line, an irregular postmedial denticulated line, which is indistinctly bent inward to below the cell, a prominent marginal line; a punctiform spot in middle of the cell, and a broad lunule at the end: hindwing with a blackish lunule at end of the cell, an irregular discal denticulated line, and a prominent marginal line. Cilia with a blackish inner line. Front of head and base of abdomen whitish; abdomen with slight ochreous band and a black band on penultimate segment; legs whitish; a black band on fore tibiæ.

Expanse ♂ ♀ 1 to $1\frac{1}{10}$ inch.

Genus PACHYZANCLA.

Pachyzancla, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 315.

Male. Forewing narrow, elongate, exterior margin slightly oblique; cell fully half the length; first subcostal emitted at one-fifth before end of the cell, second and third from angle close to end, third bifid, fifth curved upward from the end; discocellular outwardly oblique, slightly concave in middle, radials from angle near the ends; two upper medians from end of cell, lower at one-fourth: hindwing rather narrow, triangular, exterior margin slightly convex; cell one-third the length; subcostals from end; discocellular slightly concave, radial from lower end; two upper medians from end of cell, lower at one-third. Body slender; tegulæ with very long lax hairy scales; labial palpi obliquely ascending, laterally broad, second joint truncate, third joint small, conical, scarcely visible; maxillary palpi rather short; antennæ setaceous; legs rather short, smooth, spurs long, slender, unequal in length.

Type, P. mutualis.

PACHYZANCLA MUTUALIS (Plate 178, Fig. 15, ♂).

Botys mutualis, Zeller, Lep. Microp. Caffr. Kongl. Vet. Akad. Handl. 1852, p. 40.

Pachyzancla mutualis, Snellen, Tijd. voor Ent. 1883, p. 129; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 315.

Botys stultalis, Walker, Catal. Lep. Het. B. M. xviii. p. 669 (1859).

Botys retractalis, Walker, *id.* xxxiv. p. 1447 (1865).

Botys ægrotalis, Snellen, Tijd. voor Ent. 1872, p. 90, pl. 7, fig. 8; Midd. Sumat. iv. 1, p. 63, *nec* Zeller.

Cinereous-ochreous, with a purplish tinge. Both wings crossed by a slender pale blackish irregular undulated denticulated discal line, which is curved inward below the cell, but does not extend to a blackish lunate spot at end of the cell; a

slender blackish marginal line: forewing also with a blackish curved subbasal line, and a dot in middle of the cell. Cilia with a slender blackish inner line. Body beneath, base of palpi, and legs pure white; palpi above brownish; forelegs with blackish bands.

Expanse $\frac{8}{10}$ inch.

PACHYZANCLA BASALIS.

Botys basalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1404 (1865).
Botys apertalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1450 (1865).

Bright ochreous-yellow, palest on the hindwing. Both wings crossed by a discal somewhat indistinct, very slender blackish irregularly-undulated denticulated line, which is curved inward below the cell; a distinct black spot at end of the cell; marginal line ochreous-brown: forewing also with a slender curved subbasal line, and a dot in middle of the cell. Body beneath, base of palpi, and legs white; forelegs with pale brown bands; middle tibiæ with pale brown basal streak.

Expanse $\frac{8}{10}$ inch.

Genus MABRA.

Wings small: forewing elongate, triangular, exterior margin oblique, slightly convex in the middle; cell half the length; first subcostal emitted at one-third before end of the cell, fifth from the end; discocellular concave, radials from near upper and close to lower end; two upper medians from end of cell, lower at one-third: hindwing rather narrow, exterior margin very oblique, slightly convex in the middle; cell one-third the length; subcostals from the end; discocellular deeply concave, radial and two upper medians from end of the cell, lower median at one-third. Body slender; labial palpi porrect, second joint projecting half beyond the eyes, very laxly squamous, third joint lanceolate, half length of second; maxillary palpi ascending, squamous; antennæ with fine short ciliæ; legs smooth, rather short, spurs long, slender, equal in length.

Type, M. Eryxalis.

MABRA ERYXALIS (Plate 179, Fig. 4).

Asopia Eryxalis, Walker, Catal. Lep. Het. B. M. xvii. p. 371 (1859).

Ochreous-yellow. Both wings with the discal area covered with dark cinereous and brown scales, the disc being crossed by an indistinct brown irregular undulated line, beyond which is a brownish-ochreous submarginal line: forewing also with a brownish-ochreous curved antemedial line. Abdomen brownish speckled, and with slender white segmental bands; forelegs cinereous-brown; hindlegs whitish.

Expanse $\frac{5}{10}$ to $\frac{6}{10}$ inch.

Genus CNAPHALOCROCIS.

Cnaphalocrocis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 384 (1863); Meyrick, Trans. Ent. Soc. Lond. 1884, p. 303.

Wings small. Male: forewing elongate, triangular; with a small glandular pouch on the costa above before the middle, which is covered by a double coalescing tuft of hairs, and with a contiguous lower tuft of hairs projecting forward along middle of the submedian; cell half the length; first subcostal curved below the pouch, fifth from end of the cell; discocellular slightly concave, radials from upper end and close to lower end; middle median close to end of cell, lower at one-fifth; submedian straight: hindwing short, triangular; apex pointed; cell one-third the length; subcostals from end, upper coalesced to the costal to near its extreme end; discocellular outwardly oblique, radial from lower end; two upper medians from end of cell, lower at one-fourth; submedian and internal veins straight. Body slender, anal tuft pointed; forehead ridged at the sides; labial palpi moderately long, porrect, extending half beyond the head, obtusely pointed in front, truncate at the tip above, laxly squamous; maxillary palpi dilated with lax scales at the tip, truncate; antennæ submoniliform; legs moderately long; fore tibiæ short and dilated with hairs; inner spurs long, outer short.

Type, C. medinalis.

CNAPHALOCROCIS MEDINALIS.

Salbia medinalis, Guénee, Delt. et Pyral. p. 201 (1854), ♀.
Botys rutilalis, Walker, Catal. Lep. Het. B. M. xviii. p. 665 (1859).
Botys Iolealis, Walker, *id.* p. 666 (1859).
Cnaphalocrocis Iolinalis, Lederer, Pyral, Wien. Ent. Monat. vii. p. 385, pl. 12, fig. 7, ♂ (1863); Snellen, Tijd. voor Ent. 1883, p. 135.
Botys acerrimalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1449 (1865).

Ochreous-yellow, glossy: forewing with the costal edge and a marginal band purplish cinereous-brown; crossed by an outwardly-oblique slender brown antemedial line, and an inwardly-oblique discal line; a slender brown lunule at end of cell; a blackish marginal line: hindwing with a slender brown spot at end of the cell, a discal line, a cinereous-brown marginal band, and a blackish marginal line. Cilia edged with white, with a brown inner line. Front of thorax, head, palpi above, and fore tibiæ brown; legs white. Male with a glandular tuft of cinereous-black hairs on middle of the costa above, and with a contiguous lower tuft of ochreous hairs; anal tuft black, and with two white longitudinal streaks.

Expanse ♂ ♀ $\frac{6}{10}$ inch.

This is quite a distinct species from the Australian C. nurscialis (*Botys Nur-*

scialis, Walker, Catal. xviii. 724), which has been erroneously referred to it by Mr. Meyrick in his paper on the Australian Pyralidæ, in Trans. Ent. Soc. Lond. 1884, p. 304.

Genus DOLICHOSTICHA.

Dolichosticha, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 304.

Closely allied to Marasmia. Wings narrower; venation similar; differs in the absence of the glandular tuft on the forewing and also of the lanuginose patch on the hindwing of the male. Palpi, antennæ, and legs similar; abdomen with a similar villose subanal tuft.

DOLICHOSTICHA VENILIALIS.

Asopia venilialis, Walker, Catal. Lep. Het. B. M. xvii. p. 373 (1859).
Botys marisalis, Walker, Catal. Lep. Het. B. M. xviii. p. 717 (1859), ♀.
Dolichosticha venilialis, Meyrick, Trans. Ent. Soc. Lond. (1884), p. 305.

Yellowish cinereous-white, opalescent: forewing with the costal and exterior marginal border broadly purplish cinereous-brown; some black dots along middle of the costal edge; crossed by a slender curved brown antemedial line, and an irregular discal line, the latter being bent indistinctly to below the cell and almost touching a lunule at the end: hindwing with two brown lines ending at the anal angle, and a brown marginal band. Cilia whitish, with brown inner line. Thorax, front of head, palpi above, and fore tibiæ brown; palpi beneath and legs white. Male with cinereous-brown subanal and anal tuft, the latter white streaked.

Expanse ♂ ♀ $\frac{5}{10}$ inch.

Genus BACOTOMA.

Forewing moderately long, exterior margin oblique, slightly convex; cell three-fifths the length; first subcostal at one-fifth before end of the cell, second and third from angle close to end, third bifid, fifth from the end; discocellular bent near each end, radials from the angles; middle median from angle close to end, lower at nearly one-fourth; submedian nearly straight, with a short lower recurved slender branch: hindwing broad, triangular; apex obtuse; cell one-third the length; subcostals from the end; discocellular slightly concave, radial from lower end; two upper medians from end, lower at nearly one-third; a submedian and two internal veins. Body moderately slender, abdomen in male long, with short lateral subanal tufts and long hairy anal tuft: labial palpi obliquely ascending, broad, very compactly squamous, second joint truncate, third joint very minute; obtusely conical; antennæ submoniliform; legs moderately long, smooth, spurs long, unequal.

BACOTOMA ABJUNGALIS (Plate 180, Fig. 8).

Botys abjungalis, Walker, Catal. Lep. Het. B. M. xviii. p. 670 (1859).
Botys abjunctalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 376, pl. 11, fig. 11 (1863).

Ænescent-yellow: forewing with a broad iridescent bluish purplish-brown band

along the costa and exterior border; the extreme costal edge yellowish; a transverse curved antemedial and an irregular interrupted postmedial black denticulated line, and a curved streak at end of the cell; both lines dilated at the costal end: hindwing with the extreme base bluish purplish-brown; a slender bent streak at end of the cell, and an interrupted discal line; apical border and marginal line also tinged with bluish purplish-brown. Cilia cinereous-brown, whitish posteriorly, and with a dark brown inner line. Thorax, head, and palpi above purplish-brown; palpi beneath white; abdomen ochreous-yellow towards the end, with anal and subanal brown-bordered bands; legs whitish; fore tibiæ with brown bands.

Expanse 1 inch.

Genus MARASMIA.

Marasmia, Lederer, Pryal. Wien. Ent. Monat. vii. p. 385 (1863).

Wings somewhat narrower than in Cnaphalocrocis. Male: forewing with an elongated oval glandular pouch situated below the first subcostal and occupying the upper exterior half of the cell, the pouch being covered above by a tuft of long coarse curved scales, which project backward from the costal vein; the subcostal is curved below the pouch and thence upward to near end of the cell, the second and third branches being emitted close to the end, and fifth from the end; upper radial from near middle of discocellular; lower median at one-fourth before end of cell: hindwing with similar venation to Cnaphalocrocis, and a lanuginous costal patch before the apex. Abdomen with a slender pointed anal tuft, and a villose tuft on the two subanal segments; palpi porrect, broad, pointed in front, clothed with long decumbent hairy scales, truncate above, third point concealed; maxillary palpi dilated with scales at the lip; antennæ submoniliform; legs slender, fore tibiæ tufted.

MARASMIA RURALIS.

Botys ruralis, Walker, Catal. Lep. Het. B. M. xviii. p. 666 (1859); *id.* xix. p. 994.
Marasmia cicatricosa, Lederer, Pyral. Wien. Ent. Monat. vii. p. 386, pl. 12, fig. 8 (1863), ♂.

Pale yellow: forewing with a costal and exterior marginal purplish cinereous-brown band; some prominent black dots, about ten in number, along middle of the costal edge; crossed by an inwardly-oblique brown antemedial line, and an irregular discal line, the latter bent inward to below the cell and almost touching a lunule at end of the cell: hindwing with a brown line from end of the cell, and a discal line, both ending at anal angle; beyond which is a broad purplish-cinereous marginal band. Cilia whitish, with a brown inner line. Thorax in front, head, palpi above, and fore tibiæ cinereous-brown; palpi beneath and legs whitish. Male with an elongated oval glandular pouch extending below the costa to near the median vein, the pouch covered above by a tuft of long coarse blackish-cinereous scales, which

project hindward over the cell; anal and subanal tuft ochreous-brown, the former white streaked.

Expanse ♂ ♀ $\frac{5}{10}$ inch.

Genus RAVANOA.

Forewing rather broad, triangular; cell fully half the length; first subcostal at one-fifth before end of the cell, second trifid, fifth from end; discocellular slightly concave, radials from near the ends; middle median from close to end of cell, lower at one-third; submedian recurved, with a slender lower recurved branch extending to one-third its length: hindwing broad, triangular; cell one-third the length; subcostals from the end, upper joined to the costal to near its end; discocellular slightly concave, radial from lower end; two upper medians from end of cell, lower at one-third; a straight submedian and two internal veins. Body moderately stout, thorax robust, abdomen keeled above, attenuated at tip; tuft pointed; labial palpi curved, projecting one-third beyond the head, laxly squamous beneath, third joint very short, pointed; maxillary palpi distinct, slender, oblique; antennæ submoniliform; legs slender, smooth, spurs very long, hind spurs of nearly equal length.

Type, R. bilineolalis.

RAVANOA BILINEOLALIS (Plate 180, Fig. 9).

Zebronia bilineolalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1350 (1865).

Silvery-white. Both wings with four transverse inwardly-oblique brown lines; the first line antemedial and straight, second postmedial and curved inward to below end of the cell on the forewing, third submarginal and slightly curved, fourth marginal; each line converging to anal angle: forewing also with a narrow brown costal band, and a lunule at end of the cell. A black band on subanal segment; legs white; sides of thorax, fore and middle tibiæ brown above.

Expanse $\frac{7}{12}$ inch.

RAVANOA CREONALIS (Plate 180, Fig. 10).

Botys creonalis, Walker, Catal. Lep. Het. B. M. xviii. p. 579 (1859).
Botys neoclesialis, Walker, *id*. p. 635 (1859).
Botys suspicalis, Walker, *id*. p. 667 (1859).
Botys convectalis, Walker, *id*. xxxiv. p. 1411 (1865).

Male and female. Pale cinereous-ochreous, opalescent; costal border of forewing and exterior borders purplish cinereous-brown; crossed by an antemedial, a discal, and a submarginal blackish line, the two former ending at the anal angle, the latter less defined, slightly denticulated and ending half-way before the anal angle; the discal line curved outward beyond the cell on the forewing; a black bipunctate lunular mark at end of cell of forewing; marginal line black. Cilia white, with slender blackish inner line. Front of thorax, head, palpi above, fore and middle legs

above, subanal and anal tuft purplish cinereous-brown; anal tuft with white streaks; legs beneath ochreous-white.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Genus ACHARANA.

Forewing rather long, narrow; cell more than half the length; first subcostal emitted at nearly one-fourth before end of the cell, third bifid, fifth from end, curved upward from the base and almost touching the third; discocellular concave, radials from near the ends; two upper medians from the end of cell, lower at nearly one-fourth; submedian recurved: hindwing broad, exterior margin convex; cell broad, one-third the length; two subcostals from end of cell, upper joined to the costal to one-third its length; discocellular concave, radial from lower end; two upper medians from end of cell, lower about one-third; a straight submedian and two internal veins. Body rather stout; abdomen keeled above, anal tuft long, pointed; labial palpi porrect, projecting half beyond the head, squamous, rather broad, truncate at the tip, pointed in front, third joint concealed; maxillary palpi oblique, reaching tip of the labial; antennæ in male setaceous, very minutely ciliated; legs rather stout, smooth; middle femora in male tumid and fringed above with short scales; spurs very long.

Type, A. Otreusalis.

ACHARANA OTREUSALIS (Plate 180, Fig. 11).

Botys Otreusalis, Walker, Catal. Lep. Het. B. M. xviii. p. 639 (1859).
Botys triarialis, Walker, *id.* p. 639 (1859).
Botys Neloalis, Walker, *id.* p. 643 (1859).
Botys abstrusalis, Walker, *id.* p. 663 (1859).
Botys Pharaxalis, Walker, *id.* p. 725 (1859).
Botys immundalis, Walker, *id.* xxxiv. p. 1448 (1865).
Botys phæopteralis, Meyrick, Trans. Ent. Soc. Lond. (1884), p. 322 (*nec* Guénee).

Purplish ochreous-brown. Wings iridescent: forewing with an indistinct pale-bordered blackish outwardly-oblique undulated antemedial line, an inwardly-oblique zigzag denticulated discal line, followed by a pale denticulated marginal fascia; a punctiform orbicular spot and a reniform mark, and a spot at base of the cell: hindwing with a pale-bordered blackish lunule at end of the cell, a zigzag discal denticulated line, and a pale denticulated marginal fascia. Cilia cinereous-white, with a brown inner line. Palpi above and forelegs dark brown, beneath white; middle and hindlegs pale ochreous.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

ACHARANA PRÆTERITALIS.

Botys Præteritalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1405 (1865).

Cinereous-brown. Wings brown speckled: forewing with an obsolescent brown

antemedial line, an irregular discal line, and a brown marginal line: hindwing with a brown marginal line. Cilia cinereous-white, with a brown inner line. Palpi beneath and legs white, fore tibiæ cinereous-brown above.

Expanse 1 inch.

ACHARANA SIMILIS (PLATE 180, FIG. 12).

Pale ochreous-brown: forewing with a brown transverse antemedial, and an irregular postmedial denticulated line, the latter bent outward at the lower radial and inward at the lower median; a punctiform spot in middle of the cell, and a lunule at the end: hindwing with a brown lunular spot at end of the cell, and an irregular discal denticulated line. Cilia cinereous-white, with a brown inner line. Palpi beneath white; legs pale ochreous-brown.

Expanse 1 inch.

Genus PLEONECTUSA.

Pleonectusa, Lederer, Pyral. Wien. Ent. Monat. vii. p. 426 (1863).

Male. Forewing long, narrow, triangular; cell very narrow, more than half the length; first subcostal emitted at one-fifth before end of the cell, second very close to end, trifid, fifth from the end; discocellular concave, radials from near the ends; two upper medians from end of cell, lower at one-fifth; submedian with a slender lower recurved branch: hindwing rather long, narrow, triangular, apex produced, exterior margin slightly convex hindward; cell one-third the length; two subcostals from the end, upper joined to costal to nearly half its length; discocellular outwardly oblique, very concave, radial from lower end; two upper medians from end of cell, lower at one-third; a submedian and two internal veins. Body slender, abdomen very long, extending more than half beyond hindwings, anal tuft long, pointed; labial palpi curved, ascending, laxly squamous, third joint short, slender; maxillary palpi slender, reaching the end of labial; antennæ slender, submoniliform; legs slender, smooth, tarsi very long, spurs unequal.

Type, P. admixtalis.

PLEONECTUSA ADMIXTALIS (PLATE 180, FIG. 13).

Botys admixtalis, Walker, Catal. Lep. Het. B. M. xviii. p. 665 (1859).
Botys Panœusalis, Walker, *id.* xix. p. 998 (1859).
Pleonectusa tabidalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 426 (1863).

Pale cinereous-ochreous. Wings opalescent: forewing with the costal border and marginal line purplish-brown; crossed by an inwardly-oblique discal purple-brown line, which is dilated at the costal end; a slight brown punctiform spot in middle of cell, and a more prominent lunule at the end: hindwing with a slender brown discal line, and a slight spot at end of the cell. Cilia white, with brown inner line. Sides

of thorax, palpi above, and base of fore and middle tibiæ purplish-brown; base of palpi and legs whitish.

Expanse $\frac{8}{10}$ inch.

PLEONECTUSA ADHÆSALIS (PLATE 180, FIG. 14).

Botys adhæsalis, Walker, Catal. Lep. Het. B. M. xviii. p. 664 (1859), ♀.
Botys Damasalis, Walker, *id.* p. 668, ♂.

Pale purplish cinereous-brown: forewing crossed by a slender indistinct brown curved discal line, and a marginal line; a slight punctiform spot in middle of the cell and a lunule at the end: hindwing with a slender indistinct brown discal line, a marginal line, and a lunule at end of the cell. Cilia whitish, with a brown inner line. Palpi brown above, white beneath; legs cinereous-brown.

Expanse $\frac{7}{10}$ inch.

Genus ÆTHOLIX.

Ætholix, Lederer, Pyral. Wien. Ent. Monat. vii. p. 437 (1863).
Ædiodes (part), Guénee, Delt. et Pyr. p. 191 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 347 (1859).

Forewing moderately long, triangular; costa arched towards the end, exterior margin convex in the middle; cell half the length; first subcostal emitted at one-fourth before end of the cell, second free, third bifid, fifth from end and curved upward; discocellular slightly concave, radials from near the ends; middle median from angle at end of cell, lower at one-fourth: hindwing short; exterior margin very oblique, convex in the middle; cell broad, one-third the length; subcostals from end; discocellular outwardly oblique, radial from lower end; two upper medians from end of cell, lower at one-fourth. Body moderately stout; labial palpi ascending, curved, reaching the vertex, laxly squamous, third joint small, conical; maxillary palpi short, slender; antennæ of male with very fine short ciliæ; legs rather long, smooth; fore tibiæ short, dilated, squamous; spurs moderately stout, unequal.

Type, Æ. flavibasalis.

ÆTHOLIX FLAVIBASALIS.

Ædiodes flavibasalis, Guénee, Delt. et Pyral. p. 193 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 347 (1859).
Ætholix flavibasalis, Lederer, Pyral. Wien Ent. Monat. vii. p. 437, pl. 17, fig. 6 (1863).

Forewing with a pale yellow basal band, which is ochreous spotted and has a black border; a broad purplish cupreous-brown medial and outer band; between the two latter bands is a black denticulated-bordered undulated semidiaphanous white band, which is very narrow below the median vein: hindwing with a black-bordered pale yellow orchreous-spotted basal band, a broad semidiaphanous white medial band, and a black wavy-bordered purplish cupreous-brown band. Head,

thorax, and abdomen pale yellow, with ochreous spots; abdomen brown speckled, with slender black segmental bands, and a dark subterminal brown band in the male; palpi brown; legs cinereous-brown, with blackish bands.

Expanse $\frac{7}{10}$ to $\frac{9}{10}$ inch.

Genus AGROTERA.

Agrotera, Schrank, Fauna Boica, ii. 2, p. 163 (1802); Hübner, Verz. bek. Schmett. p. 348 (1825-7); Guénee, Delt. et Pyralites, p. 217 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 386; Lederer, Pyral. Wien. Ent. Monat. vii. p. 147 (1863).

Forewing rather long, triangular, subfalcate, exterior margin convex in the middle; cell two-fifths the length; first subcostal emitted at one-fourth before end of cell, second at one-sixth, trifid, fifth from end of the cell; discocellular concave, radials from the ends; two upper medians from end of the cell, lower at one-fifth: hindwing short, triangular, exterior margin very oblique, slightly convex; cell one-third the length; two subcostals from end of the cell; discocellular bent outward in the middle, radial from lower end; two upper medians from end of cell, lower at one-fourth. Body slender; abdomen of male long, extending half beyond hindwings, slightly tufted on each side; palpi vertical, squamous, reaching level of eyes, second and third joints distinctly separated, second joint truncated, third joint also truncate in front; antennæ submoniliform, minutely pubescent; legs slender, bare, rather long, spurs very slender.

Type, A. nemoralis.

AGROTERA EFFERTALIS.

Ædiodes effertalis, Walker, Catal. Lep. Het. B. M. xvii. p. 348 (1859), ♀.
Agrotera effertalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 440.

Base of wings broadly yellowish-white, bordered by a transverse black undulated line, the outer area glossy purplish-brown, across which is a very indistinct blackish irregularly-undulated submarginal line: forewing with a few orange-yellow streaks at the base, above which is a brown costal spot; a partly black-bordered ochreous spot at end of the cell. Cilia of forewing alternately purple-brown and white, of hindwing white at the anal angle. Body yellowish-white; thorax and base of abdomen with orange-yellow bands; tip of abdomen purple-brown; palpi, fore tibiæ, and bands on fore tarsi brown; middle and hindlegs white.

Expanse $\frac{6}{10}$ to $\frac{7}{10}$ inch.

Genus LEUCINODES.

Leucinodes, Guénee, Delt. et Pyral. p. 221 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 392 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 440 (1863).

Male. Forewing elongated, subfalcate; exterior margin slightly convex and undulated; cell two-thirds the length; first subcostal emitted about one-sixth before end of the cell, second and third contiguous at their base, third bifid, fifth from end

of the cell; discocellular slightly concave, radials from near the ends; middle median close to end of cell, lower at one-third; submedian straight: hindwing rather narrow, exterior margin convex in the middle; cell about half the length; subcostals from the end, upper partly joined to the costal; discocellular obliquely concave, radial from close to lower end; middle median near the end, lower at nearly half. Body moderately slender, abdomen keeled above; labial palpi rather long, obliquely ascending, pilose beneath, third joint lanceolate, half length of the second; maxillary palpi not visible; antennæ minutely pectinated; legs slender, smooth, moderately long, with unequal spurs.

LEUCINODES ORBONALIS (Plate 179, Fig. 9).

Leucinodes orbonalis, Guénee, Delt. et Pyral. p. 223 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 393; Lederer, Pyral. Wien. Ent. Mon. vii. p. 440.

Opalescent-white: forewing with a reddish-ochreous basal band, a medial irregular-shaped band, and a short apical band; the basal and medial band bordered externally by a parallel slight black-speckled line, and the apical band by an inner thicker black line; upper part of the middle is more or less obsolescent; between the inner bands is a pale ochreous costal patch, and a similar-coloured fascia across the discal area: hindwing with a slender black-speckled discal irregular-waved line, a pale ochreous outer fascia, a black spot at end of cell and one above anal angle. Both wings also with a marginal row of black dots, of which the apical and middle dot is somewhat the largest. Body speckled with ochreous-brown; abdomen whitish at the base; palpi and legs white; bands on palpi and forelegs ochreous-brown.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

LEUCINODES OPALINA (Plate 179, Fig. 10).

Opalescent-white: forewing with some ochreous-brown speckles at the base. Both wings with a very slender ochreous-brown undulated outer discal line, the line slightly bordered externally with pale yellow, and followed by a brown-speckled submarginal sinuous band, the lower end of the band on both wings being very slender, the marginal border apically and the ciliæ also pale yellow; a black spot at end of each cell, and some slightly yellow streaks on the disc. Bands on palpi, a narrow collar on thorax, and fore tibiæ ochreous-brown.

Expanse, ♂ $\frac{6}{12}$, ♀ $\frac{7}{12}$ inch.

Genus REHIMENA.

Rehimena, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1492 (1865).

Forewing elongate, rather broad, exterior margin oblique, slightly convex; cell narrow, fully half the length; first subcostal at one-sixth before end of the cell, second and third from angle close to end, third bifid, fifth from end; discocellular concave,

radials from near each end; middle median close to end, lower about one-fourth; submedian extending upward along base of median for a short distance and thence recurving to its ordinary position, the curved area enclosing a naked vitrious oval space; with a slender lower branch extending to nearly half its length: hindwing triangular, apex convex; cell one-third the length; subcostals from end; discocellular outwardly oblique, concave, radial from extreme lower end; two upper medians from extended end of cell, lower at one-fourth; a submedian and two internal veins. Body slender; tegulæ with long broad scales; labial palpi curved upward, reaching level of vertex, squamous in front, third joint short, elongate, conical, pointed; maxillary palpi slender; legs slender, smooth, fore and middle tibiæ squamous; spurs long, slender, unequal. Antennæ slender, setaceous.

REHIMENA PHRYNEALIS (Plate 181, Fig. 5).

Botys Phrynealis, Walker, Catal. Lep. Het. B. M. xviii. p. 630 (1859).
Rehimena dichromalis, Walker, *id.* xxxiv. p. 1492 (1865).

Purplish-cinereous: forewing crossed by a broad medial brown-bordered yellow band, the inner border of which is curved, the outer border sinuous and connected by an intermediate costal yellow streak to a short preapical yellow band; cilia alternated with yellow, and with a yellow inner line: hindwing pale purplish-cinereous; cilia cinereous anteriorly, yellowish posteriorly. Body purplish-cinereous; sides of thorax, head, palpi, and streak on forelegs ochreous; legs white.

Expanse, ♂ ♀ $\frac{10}{12}$ to $\frac{11}{12}$ inch.

REHIMENA SUBJUNCTALIS (Plate 181, Fig. 6).

Botys subjunctalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1404 (1865).

Purplish cinereous-brown: forewing with a yellow streak at base of the costa, a constricted spot from middle of the costa, and a slender costal streak beyond, followed by a constricted streak before the apex. Cilia edged with white. Legs whitish; fore and middle tibiæ with a brown band.

Expanse 1 inch.

REHIMENA (?) INCISALIS (Plate 181, Fig. 1).

Botys in(s)cisalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1410 (1865).

Forewing bluish purple-brown, iridescent; with a golden-yellow dentate costal and oblique exterior marginal band: hindwing pale dull golden-yellow, the outer border tinged with purple-brown. Cilia yellow. Thorax and head bluish purple-brown; abdomen dull golden-yellow; palpi, fore, and middle legs above, golden yellow; body and fore and middle legs beneath, and hind legs entirely white.

Expanse 1 to $1\frac{3}{8}$ inch.

REHIMENA (?) PHYCIDALIS.

Botys Phycidalis, Walker, Catal. Lep. Het. B. M. xviii. p. 675 (1859).

"Male. Cinereous-brown. Wings with a purplish tinge, except towards the base, and with a rather broad yellow black-bordered middle band; submarginal line and marginal points black: forewings with a large luteous costal subapical patch."

"Expanse 8 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus COPTOBASIS.

Coptobasis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 429 (1863).

Male. Forewing somewhat long, rather broad, costa arched towards the end, apex pointed, exterior margin very slightly oblique and convex; cell half the length; first subcostal emitted at one-sixth before end of the cell, second free, third bifid, fifth from the end; discocellular outwardly oblique, slightly concave, radials from near middle and lower end; middle median from angle close to end of cell, lower at one-sixth; submedian waved near the base, with a very slender short recurved lower branch: hindwing broad, triangular, apex obtuse, exterior margin convex; cell one-third the length; subcostals from the end, first partly joined to the costal; discocellular deeply concave, radial from lower end; two upper medians from end of the cell, lower at one-fourth. Body moderately slender; abdomen attenuated at the apex; tegulæ clothed with broad rather long spatular scales; labial palpi nearly vertical, second joint extending above the vertex, laxly squamous, broad laterally, truncate at the end, third joint very short, slender; maxillary palpi erect, slender; antennæ slender, setaceous; legs moderately long, smooth, spurs long, slender, unequal in length.

Type, C. opisalis.

COPTOBASIS LUNALIS.

Botys lunalis, Guénee, Delt. et Pyral. p. 352 (1854).
Botys Thyasalis, Walker, Catal. Lep. Het. B. M. xviii. p. 734 (1859); *id.* xix. p. 1007.
Coptobasis Thyasalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 429.

Purple-brown, paler and somewhat ænescent-brown on some specimens, iridescent: forewing crossed by an indistinct slightly pale-bordered blackish outwardly-curved antemedial line, and an irregular postmedial line, the latter bent inward below end of the cell; a white lunate spot at end of the cell, and a small punctiform spot in the middle: hindwing with a similar irregular discal line, which is bent inward to a slight black streak at end of the cell. Cilia of hindwing edged with cinereous-white. Abdomen with slender white bands on anal segments; base of palpi, body beneath, and legs white; forelegs slightly ochreous above; fore femora and tibiæ with

black terminal band; middle and hind tibiæ longitudinally streaked with black above.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{2}{10}$ inch.

COPTOBASIS ABDUCTALIS (Plate 181, Fig. 7).

Botys abductalis, Walker, Catal. Lep. Het. B. M. xviii. p. 669 (1859).

Botys luminalis, Lederer, Pyral. Wien. Ent. Monat. vii. pp. 430, 482, pl. 16, fig. 10 (1863).

Purple-brown, iridescent: forewing crossed by a very indistinct pale-bordered blackish antemedial line, and an irregular postmedial line, the latter ending in a prominent white tridentate subcostal spot; a white lunule at end of the cell, and a small punctiform spot in the middle: hindwing with a very indistinct pale-bordered black irregular discal line, which is more distinct at the costal end. Cilia of hindwing edged with white. Base of palpi white; abdomen beneath and legs brownish-white; fore and middle tibiæ with brown bands.

Expanse, ♂ 1, ♀ $1\frac{1}{10}$ inch.

COPTOBASIS CROTONALIS.

Botys Crotonalis, Walker, Catal. Lep. Het. B. M. xix. p. 997 (1859).

Purplish-brown, iridescent: forewing crossed by an indistinct black outwardly-oblique zigzag antemedial line, and an acutely-serrated postmedial line, the latter extending straight from the costa to lower median, whence it is bent inward to below end of the cell; an indistinct brown-centred black orbicular and reniform mark: hindwing with a less distinct blackish sinuous discal line, and a streak at end of the cell. Base of palpi, body beneath, and legs pale brownish-white; forelegs and tarsi with blackish bands; middle and hind femora with black knees.

Expanse $1\frac{3}{10}$ inch.

COPTOBASIS FRATERNA (Plate 181, Fig. 8, ♂).

Male. Purplish-brown: forewing with an indistinct black obliquely-zigzag antemedial line, and an irregular postmedial obtusely-denticulated line, a punctiform orbicular spot and a reniform mark: hindwing with an indistinct black streak at end of the cell, and an irregular discal denticulated line. Base of palpi, body beneath, and legs whitish; forelegs and tarsi with blackish bands.

Expanse $1\frac{1}{8}$ inch.

Colombo (*Mackwood*).

Smaller than *C. crotonalis*. Differs on the forewing in the postmedial line bulging outward from below the lower radial, and being more obtusely denticulated; the orbicular and reniform mark is also entirely black. On the hindwing the discal denticulated line descends straight from the costa to the lower median.

COPTOBASIS TROPICALIS (Plate 181, Fig. 9).

Botys tropicalis, Walker, Catal. Lep. Het. B. M. xviii. p. 670 (1859).

Pale ochreous-brown: forewing crossed by a pale-bordered blackish outwardly-recurved antemedial line, and an undulated postmedial line, the latter sinuous and widely bordered with white at its costal end; a punctiform blackish orbicular spot, and a blackish-bordered wide white reniform mark: hindwing with a white-bordered blackish lunule at end of the cell, and an undulated discal line. Cilia edged with white. Palpi beneath and legs white; fore tibiæ pale ochreous-brown.

Expanse $\frac{9}{10}$ inch.

Genus HYMENIA.

Hymenia, Hübner, Verz. bek. Schmett, p. 360 (1825-7); Walker, Catal. Lep. Het. B. M. xvii. p. 395 (1859).

Zinckenia, Zeller, Lep. Microp. Caffr. Kongl. Vet. Akad. Handl. 1852, p. 55; Lederer, Pyral. Wien. Ent. Mon. vii. p. 436 (1863); Meyrick, Tr. Ent. Soc. 1884, p. 308.

Spoladea, Guénee, Delt. et Pyral. p. 224 (1854).

Forewing rather narrow, triangular; cell more than half the length; first subcostal at one-fifth before end of the cell, third bifid, fifth straight from end of cell; discocellular slightly concave, radials from the ends; middle median very close to end of cell, lower at nearly one-third: hindwing short, rather broad, apex convex, exterior margin convex in the middle; cell two-fifths the length; subcostals from end; discocellular obliquely concave, radial from lower end; two upper medians from end of cell, lower at one-third. Body moderately slender; labial palpi ascending, slightly curved, reaching level of the eyes, second joint laxly squamous, broadest at the base, third joint small, slender, pointed; maxillary palpi slender; antennæ setaceous, basal joint nodular; legs slender, smooth, spurs long, hind spurs equal.

Type, H. perspectalis.

HYMENIA RECURVALIS.

Phalæna recurvalis, Fabricius, Syst. Ent. p. 407 (1775); Ent. Syst. iii. 2, p. 237 (1794).

Zinckenia recurvalis, Zeller, Lep. Micro. Caffr. Kongl. Vet. Akad. Handl. p. 55 (1853); Lederer, Pyral. Wien. Ent. Mon. vii. p. 437 (1863); Snellen, Tijd. voor Ent. 1872, p. 95; Meyrick, Tr. Ent. Soc. Lond. 1884, p. 308.

Spoladea recurvalis, Guénee, Delt. et. Pyral. p. 225, pl. 8, fig. 5 (1854).

Hymenia recurvalis, Walker, Catal. Lep. Het. B. M. xvii. p. 396 (1859).

Phalena fascialis, Cramer, Pap. Exot. iv. pl. 398, fig. 0 (1782); Stoll, *id.* v. pl. 36, fig. 13 (1791).

Phalæna angustalis, Fabricius, Mant. Ins. p. 309 (1787).

Hymenia diffascialis, Hübner, Verz. bek. Schmett. p. 361 (1825-7).

Hydrocampa albifascialis, Boisduval, Faun. Ent. Madag. Lep. p. 119, pl. 16, fig. I (1834).

? *Phalæna nigrella*, Linnæus, Syst. Nat. Ed. 13, iii. App. p. 225.

Dark vinaceous-brown; in some lights olivescent greyish-brown: forewing with

a short blackish-bordered white band from the costa before the apex, below and exterior to which are three small inwardly-curved superposed spots, which approach a dentate transverse white band extending from upper end of the cell to the posterior margin, this band being continued across the hindwing to near anal angle. Cilia with an interrupted brown inner line, alternated with white on forewing, entirely white on hindwing. Bands on abdomen white; collar, front of head, base of palpi, and legs yellowish; tip of palpi and bands on forelegs blackish.

Expanse $\frac{7}{10}$ to $\frac{9}{10}$ inch.

Genus EURRHYPARODES.

Eurrhyparodes, Snellen, Tijd. voor Ent. 1880, p. 215.

Molybdantha, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 309.

Male. Forewing narrow, elongated, apex obtuse, exterior margin slightly convex hindward; cell more than half the length; first subcostal emitted at one-fourth before end of the cell, third bifid, fifth from the end; discocellular erect, radials from close to each end; middle median close to end of cell, lower at nearly one-third: hindwing rather long and narrow; exterior margin convex in middle, cell one-third the length; subcostals from end; discocellular outwardly oblique; concave; radial and two upper medians from end of cell, lower median at nearly one-third; apex rounded. Body slender; abdomen with a trifid anal tuft; labial palpi porrect, broad, coarsely and laxly squamous beneath, second joint truncate, third joint short, cylindrical, exposed; maxillary palpi rather large, porrect, extending to end of second joint of labial, squamous; antennæ slender, minutely ciliated, slightly serrated towards apex; legs slender, smooth, spurs unequal in length.

Type, E. accessalis.

EURRHYPARODES ACCESSALIS (Plate 179, Fig. 6).

Isopteryx accessalis, Walker, Catal. Lep. Het. B. M. xvii. p. 405 (1859).

Eurrhyparodes stibialis, Snellen, Tijd. voor Ent. 1880, p. 216; 1883, p. 134, pl. 8, fig. 3, ♀.

Male and female. Purplish cinereous-brown: forewing with a pale yellow basal spot, a curved antemedial band, a large irregular oval spot extending from posterior margin to end of the cell, beyond which is a small upper discal spot, their interspaces being tinged with chalybeous and also speckled with a few slight yellow strigæ; some yellow points also along the costal edge: hindwing with the subbasal, medial, and discal area irregularly blotched with pale yellow, these blotches in the female forming three more or less irregular-shaped confluent patches; the outer margin also with a few slight yellow strigæ. Cilia yellow, with cinereous spots. Tips of tegulæ, and edge of abdominal segments, palpi beneath, and legs yellow; forelegs with cinereous-brown bands.

Expanse $\frac{5}{10}$ to $\frac{7}{10}$ inch.

EURRHYPARODES ABNEGATALIS (Plate 179, Fig. 7).

Isopteryx abnegatalis, Walker, Catal. Lep. Het. B. M. xvii. p. 404 (1859).
Botys abnegatalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 376, pl. 11, fig. 17 (1863).
Molybdantha bracteolalis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 309.
? *Botys bracteolalis*, Zeller, Lep. Microp. Caffr. Kongl. Vet. Akad. Handl. 1852, p. 30.

Male and female. Bright yellow: forewing crossed by subbasal, medial, and outer purplish cinereous-brown bands, which are tinged with chalybeous, and slightly speckled with minute yellow strigæ: hindwing with a cinereous-brown basal spot, an oval mark at end of the cell, and a broken discal and marginal yellow-speckled band. Cilia yellow, with a very slight brown inner line. Thorax and abdomen with broad brown bands; palpi tipt with brown; fore and middle legs with brown bands.

Expanse $\frac{6}{10}$ to $\frac{7}{10}$ inch.

Genus NISTRA.

Nistra, Walker, Catal. Lep. Het. B. M. xvii. p. 488 (1859).

Male. Forewing rather narrow, apex pointed, exterior margin slightly oblique and convex; cell about three-fifths the length, rather broad; first subcostal emitted at one-fourth before end of cell, third bifid, fifth from end; discocellular concave, radials from near middle and at lower end; middle median close to end, lower at one-fourth; submedian straight, with a short lower recurved branch rejoining at one-third from the base: hindwing narrow, exterior margin very oblique, convex; cell two-fifths the length; subcostals from the end; discocellular concave, radial from lower end; two upper medians from end, lower at one-third; a submedian and two internal veins. Body slender, abdomen extending half beyond the hindwings; labial palpi ascending, flat, second joint short, broad, truncate, third joint short, triangular in male, linear in female; antennæ slender, submoniliform; legs slender, smooth, spurs unequal.

NISTRA CÆLATALIS (Plate 182, Fig. 10).

Nistra cœlatalis, Walker, Catal. Lep. Het. B. M. xvii. p. 488 (1859).

Straw-yellow. Forewing crossed by a very slender interrupted antemedial blackish-waved line, and an irregular postmedial line; the costal border including an orbicular and reniform spot, and the exterior border blotched with metallic purple-brown: hindwing with a black spot at end of the cell, one above anal angle, and an interrupted slender discal line; exterior border with an apical and anal metallic purplish-brown patch. Thorax with a broad metallic brown band; tip of abdomen also brown; palpi black above, base white; legs white, fore tibiæ with a black band.

Expanse $\frac{6}{10}$ to $\frac{7}{10}$ inch.

NISTRA (?) MOLUSALIS

Botys Molusalis, Walker, Catal. Lep. Het. B. M. xix. p. 993 (1859).

Cinereous-ochreous: forewing with purplish-brown streaks at the base of costa, a transverse antemedial and an irregular discal denticulated line, and marginal points; an orbicular spot and a quadrate reniform mark: hindwing with a transverse discal irregular line, marginal points, and a quadrate spot at end of the cell. Thorax in front, head, and palpi above purplish-brown.

Expanse $\frac{8}{10}$ inch.

Genus DIASEMIA.

Diasemia, Hübner, Verz. bek. Schmett, p. 348 (1825-7); Stephens, Illust. Haust. iv. p. 37 (1834); Guénee, Delt. et Pyral. p. 233 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 407 (1859); Lederer, Pyral. Wien. Ent. Mon. vii. p. 418 (1863); Meyrick, Tr. Ent. Soc. Lond. 1884, p. 302.

Wings narrow, rather long: forewing slightly acute, exterior margin oblique; cell long, extending three-fifths the length; first subcostal emitted close to end of the cell, fifth from the end; discocellular deeply concave, radials from near the middle and lower end; middle median close to end of cell, lower more than one-fourth: hindwing long, narrow, exterior margin very oblique and recurved; cell nearly half the length; subcostals from end, first partly joined to costal; discocellular deeply concave, radial from lower end; two upper medians from end of cell, lower at one-third. Body slender; labial palpi long, porrect, rather incumbent, clothed with coarse short hairy scales, apex pointed; maxillary palpi distinct, triangular, laxly squamous; antennæ pubescent; legs long, tibiæ squamous, spurs unequal in length.

Type, D. litteralis.

DIASEMIA RAMBURIALIS (Plate 179, Fig. 5).

Hydrocampa Ramburialis, Duponchel, Lép. Fr. viii. pt. 2, p. 343, pl. 233, fig. 6 (1831); Catal. Méth. Lép. Eur. p. 202 (1844).

Botys Ramburialis, Zeller, Lep. Micro. Caffr. Kongl. Vet. Akad. Handl. 1852, p. 30.

Diasemia Ramburialis, Guénee, Delt. et Pyral. p. 234; Snellen, Tijd. voor Ent. 1884, p. 38; Meyrick, Tr. Ent. Soc. Lond. 1884, p. 302.

Isopteryx melaleucalis, Walker, Catal. Lep. Het. B. M. xvii. p. 402 (1859).

Diasemia reconditalis, Walker, *id.* xxxiv. p. 1325 (1865).

Diasemia leucophealis, Walker, *id.* p. 1326 (1865).

Greyish-black. Both wings with a few short transverse ochreous strigæ: forewing with a white spot at end of the cell, a narrow subapical short band from the costa, below which is a longitudinal oval spot and lower white speckles: hindwing with a broad white subbasal band, and an irregular medial band which is confluent with a recurved discal narrower band. Cilia white, with black macular inner line.

Body with white bands; palpi white at the base; legs brownish; forelegs with pale bands.

Expanse $\frac{3}{10}$ inch.

DIASEMIA IMPULSALIS.

Isopteryx impulsalis, Walker, Catal. Lep. Het. B. M. xvii. p. 404 (1859).

Pale ochreous-brown: forewing crossed by an inwardly-oblique short antemedial, a broad medial, and a narrow postmedial white band; the two middle areas below the cell, and the exterior border of the outer band being densely black speckled; a marginal row of black dentate spots; a lunular white spot at end of the cell: hindwing with the basal area white; crossed by a medial and discal irregular black-speckled band; marginal dentated line black. Cilia white. Legs pale brownish-ochreous.

Expanse $\frac{5}{10}$ inch.

Genus SPANISTA.

Spanista, Lederer, Pyral. Wien. Ent. Monat. vii. p. 445 (1863).

Male. Forewing long, narrow; costa arched towards the end, apex acute, subfalcate, exterior margin slightly oblique and convex hindward; cell half the length; first subcostal emitted immediately before end of the cell, second free, third bifid, fifth from end; discocellular almost erect, radials from close to each end; middle median close to end of the cell, lower about one-third; submedian almost straight: hindwing rather long, narrow, exterior margin very oblique, wavy; cell short, about one-fourth the length; subcostals from the end; both branches extending one-third their length along the costal; discocellular extremely oblique and concave, radial from lower end; two upper medians from extended end of the cell, lower at one-third. Body slender, abdomen long, extending two-thirds beyond hindwing, with a lateral apical tuft; palpi short, ascending, laxly squamous in front, apical joint short, pointed; antennæ submoniliform, the joints broad at their end; legs long, slender, spurs long and slender.

SPANISTA ORNATALIS (Plate 181, Fig. 10, ♂).

Asopia ornatalis, Duponchel, Lep. Fr. viii. p. 207, pl. 223, fig. 8 (1831).
Nymphula ornatalis, H. Schæffer, Eur. Schmett. iv. 10, 6, pl. 8, fig. 52-3.
Stenia ornatalis, Guénee, Delt. et Pyral. p. 247.
Spanista ornatalis, Lederer, Pyral. Wien. Ent. Mon. vii. p. 446; Snellen, Tijd. voor Ent. 1872, p. 96.
Botys saturalis, Treitschke, Eur. Schmett. Suppl. 2, p. 29.
Cataclysta Elutalis, Walker, Catal. Lep. Het. B. M. xvii. p. 448 (1859).
Pyralis deciusalis, Walker, *id.* xix. p. 905 (1859).

Ferruginous-brown. Both wings with a medial transverse purplish-white band which is more or less brown speckled, the speckles thickest on the costa of forewing;

the outer edge of the band defined by an irregularly-undulated black denticulated line; a row of black spots along the outer margin; the edges of the band and the marginal spots bordered with chalybeous-grey; a similar chalybeous spot at end of the cell on the forewing; a black-speckled spot at upper and lower end of the cell on hindwing. Legs whitish.

Expanse, ♂ $\frac{7}{10}$, ♀ $\frac{9}{10}$ inch.

Genus MARUCA.

Maruca, Walker, Catal. Lep. Het. B. M. xviii. p. 540 (1859).

Siriocauta, Lederer, Pyral. Wien. Ent. Monat. vii. p. 424 (1863); Meyrick, Trans. Ent. Soc. Lond. 1884, p. 299.

Crochiphora (part), Hübner.

Forewing long, apex acute, subfalcate; cell more than half the length; first subcostal emitted at one-half before end of the cell, second and third from angle close to the end, third bifid, fifth from the end, curved upward and almost coalescing with third near its base; discocellular concave, radials from near the ends; two upper medians from end of cell, upper curved upward and almost touching radial near its base, lower median at one-fifth; submedian slightly curved: hindwing broad, exterior margin convexly angular in the middle; cell two-fifths the length; subcostals from end, upper partly joined to costal; discocellular almost angular in the middle, radial from lower end; two upper medians from end of cell, lower about one-third, a submedian and internal veins. Body rather slender; abdomen extending one-third beyond hindwings; labial palpi porrect, broad, pointed in front, laxly squamous, third joint concealed; maxillary palpi rather short; antennæ slender, submoniliform; legs smooth, slender, spurs long, unequal.

Type, M. testulalis.

MARUCA TESTULALIS.

Crochiphora testulalis (Hübner) Geyer, Zütrage Samml. Exot. Schmett. iv. 12, 315, fig. 629-30 (1832).

Stenia testulalis, Guénee, Delt. et Pyral. p. 247; Walker, Catal. Lep. Het. B. M. xvii. p. 420.

Siriocauta testulalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 424; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 299; Snellen, Tijd. voor Ent. 1884, p. 39.

Hydrocampa aquatilis, Boisduval, in Guerin-Meneville's Icon. Règ. Anim. Ins. pl. 90, fig. 9 (1844).

Maruca aquatilis, Walker, Catal. Lep. Het. B. M. xviii. p. 540 (1859).

Forewing ochreous-brown, clouded with darker brown; a transverse discal black-bordered hyaline-white band extending from costal vein to lower median, a similar white oblique pyriform spot within the cell, and a punctiform spot below its middle: hindwing hyaline-white, with an irregular black-bordered ochreous-brown marginal band. Cilia brown anteriorly, white posteriorly, with a slender black inner

line. Body ochreous-brown above; palpi ochreous-brown above, white beneath; legs whitish, with brown bands.

Expanse $\frac{9}{10}$ to 1 inch.

Genus CATACLYSTA.

Cataclysta, Hübner, Verz. bek. Schmett. p. 363 (1825-7); Stephens, Ill. Haust. iv. p. 39 (1834); H. Schæffer, Schmett. Eur. iv. p. 7; Guénee, Delt. et Pyr. p. 263; Walker, Catal. Lep. Het. B. M. xvii. p. 435; Lederer, Pyr. Wien. Mon. vii. p. 453.

Wings of nearly equal length. Male: forewing long, narrow, apex somewhat pointed, exterior margin almost erect; cell two-thirds the length; first and second subcostals close to end of cell, second trifid, fifth from the end; discocellular hardly concave, radials from near the ends; middle median close to end of cell, lower at one-fourth; submedian straight: hindwing long, somewhat triangular, apex rather pointed, exterior margin short, very oblique; cell half the length; subcostals from end of cell; upper branch extending one-third its length along the costal; discocellular concave, radial from near lower end; middle median close to end of cell, lower at two-fifths. Body slender; labial palpi very slender, squamous, curved, ascending, third joint filiform, acute, short; maxillary palpi minute; antennæ submoniliform, very minutely pubescent, apical joints dilated at their ends; legs long, slender, smooth, spurs long, slender.

Type, C. lemnalis.

CATACLYSTA BLANDIALIS (Plate 179, Fig. 15).

Cataclysta blandialis, Walker, Catal. Lep. Het. B. M. xvii. p. 448 (1859).

Ochreous-yellow: forewing with an inwardly-oblique subbasal silvery-white bordered blackish band, a similar antemedial and an outwardly-oblique postmedial band, both of the latter being joined on the costa, and the broad inner area densely covered with white and black scales; a short oblique silvery-white streak before the apex, followed by a broken oblique submarginal silvery-grey band: hindwing with a silvery-white subbasal band, and a broad discal patch, densely covered with white and black scales; the outer edge of the patch having a sinuous double line and a border of four black marginal spots, each of the spots being centred by a metallic purple-blue dot. Cilia brown, with a pale middle line.

Expanse, ♂ $\frac{6}{10}$, ♀ $\frac{8}{10}$ inch.

CATACLYSTA ORNATA (Plate 181, Fig. 11).

Male and female. Silky-white: forewing with the base of the costa cinereous-brown; a small black dentate costal spot beyond the middle; an ochreous-yellow band along middle of posterior margin, an outwardly-oblique short discal band beyond the cell, and an inwardly-oblique outer discal band; the two latter bands with

a slender cinereous-brown border; a cinereous-brown streak extending obliquely below the cell from base of lower median; a slender black submarginal line, and a yellow-bordered marginal row of black dots: hindwing with a subbasal, discal, and a marginal ochreous-yellow band, the two former bands with a linear black border, and the latter with three white-tipt black spots in the middle. Tip of palpi and forelegs cinereous-brown.

Expanse 1 inch.

CATACLYSTA CUNEIFERA (Plate 179, Fig. 14).

Male. Ochreous-yellow: forewing with an inwardly-oblique white basal band, a broad anteriorly-curved discal white patch which is very sparsely speckled with black scales; followed by an oblique subapical and a broken marginal metallic white wedge-shaped band, each being slightly bordered with brown scales: hindwing with a white basal band, and a broad white discal patch, which is sparsely speckled with black scales and outwardly bordered by four black marginal spots with metallic white centres. Cilia brown.

Expanse $\frac{7}{10}$ inch.

CATACLYSTA ANGULATA (Plate 181, Fig. 12).

Silky-white: forewing crossed by a slight brown inwardly-oblique antemedial and a postmedial irregular line, the latter bent inward from the middle median to end of the cell and terminating on middle of posterior margin, the interspace longitudinally streaked with cinereous-ochreous, the streaks being also slightly bordered with purplish-brown; beyond is a curved ochreous fascia bordered by a slight brown denticulated line, followed by a parallel blackish macular submarginal line, the exterior margin being also ochreous; each line has a blackish dilated costal end; base of the costa ochreous, crossed by a short basal and subbasal blackish streak: hindwing with a cinereous-ochreous subbasal band and outer border; the latter with a marginal row of five equidistant white-bordered black spots. Fore tarsi with a blackish terminal band.

Expanse $\frac{7}{12}$ inch.

Genus TALANGA.

Forewing shorter than in Cataclysta; cell more than half the length; first subcostal emitted about one-fourth before end of the cell, second and third from angle close to the end, third bifid, fifth from the end: hindwing short, very broad, triangular; cell two-fifths the length; discocellular outwardly oblique, concave, radial and two upper medians from extreme lower end of the cell. Body slender; labial palpi obliquely ascending, rather broad, laxly clothed in front, third joint minute; maxillary palpi squamous at the tip; antennæ submoniliform; legs smooth, spurs unequal.

TALANGA SEXPUNCTATA (Plate 181, Fig. 13).

Oligostigma sexpunctata, Moore, P. Z. S. 1877, p. 616, pl. 60, fig. 12, ♀.
Glyphodes sexpunctata, Snellen, Tijd. voor Ent. 1883, p. 144, pl. 8, fig. 12, ♂.
Glyphodes lomaspilalis, Snellen, Tijd. voor Ent. (Aug.) 1880, p. 223.
Cataclysta nympha, Butler, P. Z. S. (Dec.) 1880, p. 683, ♂.

Forewing ochreous-yellow; with the costal border from the base, including a triangular patch across end of the cell, two small patches before the apex, and a slender streak along middle of the submedian vein ochreous-brown, each being bordered by an opalescent-white band, the bands from before the apex descending obliquely to near the posterior margin; a slender black marginal line: hindwing opalescent-white, with a short ochreous-yellow streak across middle of the disc, a patch before and a slender band bordering the apex; the discal streak bordered with ochreous-brown; two jet black metallic spots spangled with golden-green on middle of the outer margin, the spots externally bordered by similar minute interciliar spots, which vary from three or more in the male to five or six in the female. Body duller ochreous-yellow; sides of thorax, head, tip of palpi, and forelegs ochreous-brown; tip of abdomen black in male.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

This is quite a distinct species from the Australian T. Tolumnialis (*Leucochroma Tolumnialis*, Walker, Catal. xvii. 492) referred erroneously to Glyphodes by Mr. Meyrick in Trans. Ent. Soc. Lond. 1884, p. 298.

Genus PARAPONYX.

Paraponyx, Hübner, Verz. bek. Schmett. p. 362 (1825-7); Stephens, Illust. Haust. iv. p. 41 (1834); Guénee, Delt. et Pyr. p. 268 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 452; Lederer, Pyr. Wien. Ent. Mon. vii. p. 452.

Male. Wings of nearly equal length: forewing long, narrow, exterior margin hardly oblique; cell three-fifths the length; first subcostal emitted at one-fifth before end of the cell, second trifid, fifth from the end; discocellular concave, radials from near the ends; middle median from close to end of cell, lower at one-fifth; submedian straight: hindwing long, apex somewhat pointed, exterior margin very oblique, convex; cell half the length; two subcostals from end of cell; upper branch extending two-thirds its length along the costal; discocellular outwardly oblique, concave, radial from lower end; middle median close to end of the cell, lower at one-third. Body slender; palpi slightly ascending, curved, second joint laxly squamous, reaching more than half beyond the eyes, third joint short, lanceolate; maxillary palpi distinct, slender, laxly squamous; antennæ stout, submoniliform, minutely pubescent, the apical joints dilated at their ends; legs very long, slender, smooth, spurs slender.

Type, P. stratiotalis.

PARAPONYX LINEALIS.

Paraponyx linealis, Guénee, Delt. et Pyral. p. 271 (1854).
Oligostigma obitalis, Walker, Catal. Lep. Het. B. M. xvii. p. 432 (1859).

White: forewing with an inwardly-oblique antemedial and two discal recurved black-bordered ochreous bands, and a similar marginal band; the inner discal band enclosing a slight black-speckled spot at end of the cell: hindwing with three inner black lines, a discal and a marginal black-speckled bordered ochreous band. Body with black-speckled ochreous bands.

Expanse, ♂ $\frac{5}{10}$, ♀ $\frac{7}{10}$ inch.

PARAPONYX VOTALIS.

Oligostigma votalis, Walker, Catal. Lep. Het. B. M. xvii. p. 433 (1859).

Cinereous-white: forewing with an inwardly-oblique antemedial, and a recurved discal blackish-speckled duplex line, a similar submarginal, and a marginal line; the inner line joining a slight black-speckled spot at end of the cell: hindwing with three inner black-speckled lines, a discal black-speckled band, a submarginal and a marginal line. Cilia interlined with brown. Body with black-speckled bands.

Expanse $\frac{6}{10}$ to $\frac{7}{10}$ inch.

PARAPONYX CRISONALIS.

Hydrocampa Crisonalis, Walker, Catal. Lep. Het. B. M. xix. p. 961 (1859).

Female. Cinereous; very thickly and minutely speckled with brown: forewing darkest; with a very indistinct brown inwardly-curved antemedial and discal line, and a narrow marginal dentated line; between the two former lines is a recurved discal yellowish band, before which is a blackish-speckled spot at end of the cell: hindwing less numerously brown speckled; with an indistinct yellowish bordered medial and discal wavy band, and a slender brown marginal lunular line. Cilia pale cinereous, with a slender black macular inner line. Palpi and legs pale whitish-cinereous.

Expanse $\frac{9}{10}$ inch.

Genus CYMORIZA.

Cymoriza, Guénee, Delt. et Pyral. p. 271 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 455 (1859).

Male. Forewing rather long, almost rectangular at the tips, exterior margin slightly angular in the middle; a swollen glandular vesicle at end of the costal vein projecting slightly outward from the margin; cell narrow, disposed towards middle of the wing, more than half the length; first subcostal emitted at two-fifths before end of the cell, being curved downward and almost joined to end of the cell, second bifid, fourth and fifth from end of cell; discocellular slightly concave, one radial from lower end; middle median close to end of cell, lower at one-fourth; submedian slightly curved upward: hindwing elongate, quadrate, apex convex, exterior margin convexly angulated in the middle; cell nearly two-fifths the length;

first subcostal emitted before end of the cell, partly joined to the costal; discocellular very slender, concave, radial from lower end; upper median from end of cell, lower at two-fifths. Body moderately slender; labial palpi slender, long, curved, ascending above the vertex, joints well separated, finely squamous, third joint half length of the second, acicular; maxillary palpi short, slender, very distinct; antennæ filiform; legs long, slender, spurs very long, slender, hindlegs with equal anterior and unequal posterior spurs.

Type, C. irrectalis.

CYMORIZA ACCLARALIS.

Isopteryx acclaralis, Walker, Catal. Lep. Het. B. M. xvii. p. 403 (1859).

Pale ochreous-brown: forewing crossed by a blackish-bordered white subbasal macular band, a broader irregular medial band, a slender discal undulated line which is dilated at its costal end and indistinct hindward, followed by a marginal lunular line; a white lunule also at end of the cell: hindwing with the basal area white; crossed by a subbasal and an undulated discal blackish-bordered white line, and a marginal lunular line; a lunular mark at end of the cell. Cilia alternated with white. Thorax and abdomen with slender white bands; palpi white, tip brownish; fore femora and tibiæ brownish.

Expanse $\frac{6}{10}$ inch.

CYMORIZA PORITIALIS (Plate 179, Fig. 11).

Oligostigma Poritialis, Walker, Catal. Lep. Het. B. M. xix. p. 951 (1859).

White. Forewing crossed by a pale brown bordered ochreous-yellow subbasal, antemedial, medial, discal, submarginal, and a marginal band; the antemedial band curved upward to the medial and ending at base of the discal; below the curve is a shorter band continuous with the base of the submarginal band: hindwing crossed by a similar brown-bordered irregular medial, discal, and marginal band. Cilia ochreous-yellow. Thorax, abdomen, and palpi with ochreous bands.

Expanse $\frac{7}{10}$ inch.

Genus NIACCABA.

Niaccaba, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1272 (1865).

"Wings small, elongate: forewing rectangular at the tips, hind part of exterior margin forming a nearly right angle with the forepart: hindwing with the exterior margin slightly undulating. Body moderately stout; palpi smooth, slender, slightly curved, obliquely ascending, third joint short; antennæ stout, setulose; legs smooth, rather stout, spurs long, slender."

NIACCABA SUMPTUALIS.

Niaccaba sumptualis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1272 (1865).

Reddish-cinereous: forewing with a slight reddish tinge near the base; crossed by two or three very indistinct oblique nearly equidistant brownish lines; marginal

points brown; some brown points along the costa: hindwing rosy towards the outer border; crossed by indistinct wavy reddish lines; some semihyaline submarginal spots towards the apex.

Expanse $\frac{5}{10}$ inch.

NIACCABA BISECTALIS (Plate 179, Fig. 12).

Cataclysta bisectalis, Walker, Catal. Lep. Het. B. M. xvii. p. 449 (1859).

White. Forewing crossed by an inwardly-oblique blackish medial band, a slender recurved antemedial brown-speckled line, and a less defined postmedial denticulated line; a black dot in middle of the cell, and a reniform mark at the end; a subbasal cluster of purplish-red scales, and a darker cluster at the posterior angle; a few similar red scales also scattered over the medial and discal area; a marginal row of black dots: hindwing with an interrupted blackish-speckled bordered reddish medial band, which encloses a white dentate mark at end of the cell, followed by a broad purplish-red marginal band, the latter having a cluster of black scales at the apex and anal angle. Cilia alternated with purplish-red. Body slightly black speckled.

Expanse $\frac{7}{12}$ inch.

NIACCABA DELETA (Plate 179, Fig. 13).

White. Forewing with faint traces of a pale brownish curved antemedial line, an angular postmedial fascia and marginal band; a minute black dot at base of the wing, and a small spot at end of the cell: hindwing with faint traces of a brownish medial and a discal line, followed by a broad black-speckled marginal band; two black spots at end of the cell. Cilia pale brownish; forelegs brownish.

Expanse $\frac{5}{10}$ inch.

Genus NYMPHULA.

Nymphula, Schrank, Fauna Boica, ii. 2, p. 162 (1802); Hübner, Verz. bek. Schmett. p. 362 (1825-7); Treitschke, Schmett. Eur. vi. p. 315 (1829).

Botys * (part), Latreille, Hist. Nat. Gen. Crust. et Ins. iii. p. 414 (1802); *id.* xiv. p. 230 (1805).

Hydrocampa, Latreille, Faun. Nat. Règ. Anim. p. 478 (1825); Duponchel, Lep. Fr. viii. p. 172 (1831); Stephens, Ill. Haust. iv. p. 38 (1834); Guénee, Delt. et Pyr. p. 273; Walker, Catal. Lep. Het. B. M. xvii. p. 456; Lederer, Pyr. Wien. Ent. Mon. vii. p. 451 (1863).

Nausinoe (part), Hübner, Verz. bek. Schmett. p. 363 (1825-7).

Male. Forewing elongated, narrow; apex rounded, exterior margin oblique,

* Latreille, in his "Hist. Nat.," vol. iii. p. 414 (1802), enumerates *erigatus*, *colonum*, *purpuraria*, and *potamogata* as the species pertaining to his genus Botys. In the xiv. vol. of the same work, p. 230 (1805), he restricts the genus to *purpuraria* and *potamogata*, and in his "Consid. Gén.," p. 369 (1810), he cites the two latter species only. Samouelle, in his "Ent. Useful Comp.," p. 255 (1819), specifies *purpuraria* as the typical species. This species (*purpuraria*), consequently, becomes thus fixed as the type of Latreille's Botys. The genus therefore is removed to the Geometridæ.

convex; cell more than half the length; first subcostal emitted near to end of the cell, second from angle close to end, trifid, fifth from end; discocellular concave, radials from near each end; middle median immediately before end of the cell, lower at one-fifth; submedian much curved from the base: hindwing rather short and narrow; exterior margin very oblique, convex; cell half the length; two subcostals from end, upper extending half its length along the costal; discocellular outwardly oblique, concave, radial from its lower end; two upper medians from end of the cell, lower at two-fifths. Cilia broad. Body slender; palpi rather slender, curved, second joint pilose beneath, extending half beyond the eyes, third joint slender, squamous; maxillary palpi pilose, extending beyond second joint of labial; antennæ submoniliform, minutely pubescent in male; legs long, bare, spurs rather short.

Type, N. stagnata (*potamagalis*, Hübn.).

NYMPHULA DEPUNCTALIS.

Hydrocampa depunctalis, Guénee, Delt. et Pyral. p. 247 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 461.

Zebronia decussalis, Walker, Catal. Lep. Het. B. M. xvii. p. 481 (1859).

White. Forewing crossed by a very pale ochreous-yellow antemedial and a postmedial interrupted band, and a short oblique band from the costa before the apex, followed by a submarginal lunular line, and a slender marginal line; a blackish-speckled spot on inner band below the cell, and a similar lunule at end of the cell: hindwing with an interrupted medial and discal pale ochreous band, marginal lunular line, and slender marginal line. Cilia with an ochreous-yellow macular inner line. Sides of palpi and fore tibiæ above brownish.

Expanse, ♂ $\frac{6}{10}$, ♀ $\frac{7}{10}$ inch.

Genus ISOPTERYX.

Isopteryx, Guénee, Delt. et Pyral. p. 227 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 398 (1859); Lederer, Pyr. Wien. Ent. Monat. vii. p. 449 (1863).

Wings small. Forewing rather long, narrow; cell half the length; first subcostal emitted close to end of cell, second trifid, fifth from the end; discocellular concave, radials from near upper end and at lower end; two upper medians from end of cell, lower at nearly one-third: hindwing with the exterior margin convex in the middle; cell one-third the length; subcostals from the end; discocellular deeply concave, radial and upper median from the end of cell, lower at one-third. Body moderately slender, abdomen not long; labial palpi obliquely ascending, reaching to level of the eyes, second joint rather broad, truncate, coarsely squamous, third joint short, pointed, smooth; maxillary palpi small, linear; antennæ slender, setaceous; legs rather long, slender, smooth, hind spurs nearly equal.

Type, I. fœdalis.

ISOPTERYX FŒDALIS.

Isopteryx fœdalis, Guénee, Delt. et Pyral. p. 228, pl. 4, fig 7 (1854), ♀; Snellen, Tijd. voor Ent. 1872, p. 96; *id.* 1884, p. 47.

Isopteryx spilomelalis, Walker, Catal. Lep. Het. B. M. xvii. p. 403 (1859).

White. Forewing crossed by a black antemedial interrupted angulated line, and a more prominent postmedial irregularly-undulated line, the latter being curved inward below end of the cell, and is then continued in the same irregularly-undulated manner across the hindwing; the outer areas of both wings with a brownish sinuous blotched band and a marginal row of black dentate spots: forewing also with some basal black-speckled spots, a costal streak crossing end of the cell, and brownish-speckled intervening blotches: hindwing also with a black cell spot, and brownish-speckled discal blotches. Thorax with black spots; abdomen with brown-speckled bands; palpi and forelegs with black bands.

Expanse $\frac{5}{10}$ inch.

ISOPTERYX TRISIGNATA.

Wings ochreous-white, exterior borders pale brownish-ochreous, traversed by a darker fascia: forewing with a dark brown-bordered ochreous curved basal mark, a similar round mark across middle of the cell, and a larger constricted mark at end of the cell, followed by an irregular transverse discal denticulated brown line, and a prominent marginal line; from outer end of the basal mark and from the inner end of the second mark a pale brown line descends to the posterior margin: hindwing with two inwardly-oblique slender brown lines ending at the anal angle, and a brown marginal line. Cilia with a slender brown inner line. Body ochreous-white; an interrupted blackish band across the thorax, and an entire band across base of abdomen; basal segment of abdomen and anal tuft brown, edged with white; fore tibiæ with brown bands.

Expanse $\frac{6}{10}$ inch.

Genus MASSEPHA.

Massepha, Walker, Catal. Lep. Het. B. M. xvii. p. 488 (1859).

Forewing narrow, rather long; acute and subfalcate at tip, exterior margin slightly convex and oblique; cell more than half the length; first subcostal emitted close to end of the cell, second and fifth from the end, second trifid; discocellular waved, radials from near the middle and lower end; middle median close to end, lower at two-fifths: hindwing rather long, narrow, triangular, exterior margin slightly convex in the middle, and scalloped; cell one-third the length; subcostals from the end; discocellular outwardly oblique, concave, radial from lower end; two upper medians from end, lower at nearly one-third. Body slender, abdomen tufted at tip; palpi obliquely ascending, squamous, third joint linear, rather obtuse, not

half length of the second; antennæ filiform; legs smooth, long, slender; spurs long, slender, unequal in length.

MASSEPHA ABSOLUTALIS.

Massepha absolutalis, Walker, Catal. Lep. Het. B. M. xvii. p. 489 (1859).

Pale purplish ochreous-white. Both wings with numerous transverse more or less confluent purplish cinereous-brown strigæ, and a marginal row of black dots. Cilia purplish cinereous-brown at the apex. Thorax and abdomen with brown bands, those on the latter posteriorly bordered by a slender black line; legs with black bands.

Expanse $\frac{6}{10}$ inch.

Genus SAMEODES.

Sameodes, Snellen, Tijd. voor Ent. 1880, p. 217; *id.* 1883, p. 134; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 300.

Male. Forewing moderately long; apex subfalcate, costa distorted in the middle, where it is slightly folded beneath and covered with a lappet of coarse scales; cell three-fifths the length; first subcostal emitted at one-sixth before end of the cell, second free, third bifid, fifth curved upward from end of cell; discocellular slender, slightly concave, radials from near the ends; middle median from close to end, lower at one-fourth; submedian bent upward near the base: hindwing rather long, triangular, costa arched in the middle; cell broad, about two-fifths the length; subcostals from the end, upper partly joined to the costal; discocellular slightly concave, radial from lower end; middle median very close to end, lower at one-half; submedian and internal veins equi-distant. Body moderately slender, pointed at the apex; thorax laxly covered with broad spatular scales; tegulæ long; labial palpi porrect, apex decumbent, laterally broad, clothed with lax broad scales beneath, second joint projecting half beyond the eyes, third joint pointed, smooth; maxillary palpi minute; antennæ long, slightly serrated in front at the middle, finely ciliated; legs long, smooth, hind tibiæ thickened and tufted in the middle above the anterior spurs, posterior spurs absent, tarsi very long.

SAMEODES PIPLEISALIS (Plate 181, Fig. 14).

Stenia Pipleisalis, Walker, Catal. Lep. Het. B. M. xvii. p. 420 (1859).
Sameodes Pipleidalis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 300.
Lepyrodes lepidalis, Walker, Catal. Lep. Het. B. M. xvii. p. 465 (1859).
Samea sidealis, Walker, *id.* xix. p. 937 (1859).
Hymenia meridionalis, Walker, *id.* xxxiv. p. 1314 (1865).
Sameodes trithyralis, Snellen, Tijd. voor Ent. 1880, p. 218; *id.* 1883, p. 134, pl. 8, fig. 4.
Samea vespertinalis, Saalmuller, Ber. Senck. Gesell. 1880, p. 301.

Brownish-ochreous: forewing with three small brown-lined semihyaline-white subbasal spots, a large spot across the middle, and a discal series of spots; the latter

series traversed by a denticulated brown line: hindwing hyaline-white, with a broad macular bordered marginal ochreous-brown band, and a transverse medial irregular band, before which is a brown spot below the cell. Cilia white, spotted with brown. Abdomen with white bands; palpi white beneath; legs brown above, with white bands.

Expanse $\frac{8}{10}$ inch.

Genus LEPYRODES.

Lepyrodes. Guénee, Delt. et Pyral. p. 277 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 463 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 445 (1863).

Male. Forewing rather long, apex subfalcate; cell three-fifths the length; first subcostal emitted at two-fifths before end of the cell; second and third contiguous, third bifid, fifth from end; discocellular very slender, slightly concave, radials from near the ends; middle median close to end of the cell, lower at one-sixth; submedian nearly straight: hindwing rather narrow, exterior margin convex in the middle, slightly sinuous; cell one-third the length; subcostals from end, first branch joined to costal; discocellular very slender, concave, radial from lower end; two upper medians from end of cell, lower at one-fourth; submedian and internal veins curved. Body slender; abdomen long, attenuated; labial palpi short, porrect, compressed, very broad, laxly squamous, third joint minute; maxillary palpi very slender; antennæ long, slender, filiform; legs long, slender, smooth; hind tibiæ very long, spurs slender, equal.

Type, L. geometralis.

LEPYRODES GEOMETRALIS.

Lepyrodes geometralis, Guénee, Delt. et Pyral. p. 278, pl. 8, fig. 6 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 465 (1859); Snellen, Tijd. voor Ent. 1884, p. 45.

Brownish-ochreous: forewing with nine blackish-bordered hyaline-white spots disposed between the costal and submedian vein, four of which are located above the median and the others below it: hindwing with six transversely-disposed hyaline-white spots. Both wings with blackish intervening strigæ. Ciliæ white, with black linear inner spots. Abdomen, palpi, and legs banded with white.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Genus PESSOCOSMA.

Pessocosma, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 300.

Closely allied to Sameodes. Venation similar. No costal fold on the forewing. Antennæ ciliated with tufts of ciliæ; labial palpi more robust; hind tibiæ slender throughout, not thickened in the middle, hind pair of spurs present.

Type, P. Iolealis (*Lepyrodes Iolealis*, Walker).

PESSOCOSMA PERITALIS.

Lepyrodes Peritalis, Walker, Catal. Lep. Het. B. M. xvii. p. 466 (1859).

Brownish-ochreous: forewing with three inwardly-oblique vitreous-white intersected bands, similarly disposed to those in Sameodes Piplcisalis, excepting that the outer band is composed of only two upper inner spots and a recurved series of small spots: hindwing hyaline-white, with a broad brownish-ochreous marginal band traversed by an inner white line, and a medial waved band. Thorax white speckled; abdomen with white bands; palpi white beneath. Cilia white, with brown inner macular line.

Expanse, ♂ $\frac{5}{10}$, ♀ $\frac{6}{10}$ inch.

Genus NAUSINOE.

Nausinoe, Hübner, Verz. bek. Schmett. p. 362 (1825-7).

Phalangiodes,* Guénee, Delt. et Pyral. p. 278 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 467; Snellen, Tijd. voor Ent. 1880, p. 238; *id.* 1884, p. 45; Meyrick, Tr. Ent. Soc. Lond. (1884), p. 294.

Phalangodes, Lederer, Pyral. Wien. Ent. Monat. vii. p. 445 (1863).

Male. Forewing long, triangular; exterior margin very oblique; cell nearly two-fifths the length; first subcostal at two-fifths before end of the cell, second close to end, trifid, fifth from the end; discocellular outwardly oblique, slender, radials from near the middle and lower end; median very thick from the base to beyond end of the cell (appearing as if it was double), recurved, upper branch from end of cell, two lower branches from the thickened end at a short distance beyond the cell; submedian almost straight, with a lower branch curving downward and rejoining it at one-third from the base: hindwing short, very broad and triangular; cell very short, less than one-fourth the length; subcostals on a footstalk at a short distance beyond the cell; discocellular very slender, concave, radial from near lower end, waved at the base; middle and lower medians from close to end of cell, joined at their base, curved deeply downward and then upward; between the middle and lower median is a transparent vitreous iridescent recurved-clavate streak; a straight submedian and two curved internal veins. Female: veins normal; vitreous streak not present. Body very slender, abdomen very long and attenuated; thorax clothed with lax silky hairy scales; labial palpi porrect, compressed, broad, pilose beneath, third joint minute, pointed, decumbent; maxillary palpi minute, pilose; antennæ very long, slender, filiform; legs extremely long, slender; fore tibiæ and their tarsi clothed with long silky hairs, middle tibiæ incrassated, clothed with silky hairs beneath, hind tibiæ slightly pilose, spurs long, nearly equal in length.

Type, N. Neptis.

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* Phalangodes used in 1842 for a genus of Arachnidæ.

NAUSINOE NEPTIS.

Phalæna Noctua Neptis, Cramer, Pap. Exot. iii. p. 128, pl. 26, fig. F. (1782).
Nausinoe Neptalis, Hübner, Verz. bek. Schmett. p. 363 (1825-7).
Phalangiodes Neptisalis, Guénee, Delt. et Pyral. p. 279 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 467; Snellen, Tijd. voor Ent. 1884, p. 46; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 295.
Phalangodes Neptis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 445 (1863).

Brownish ochreous-yellow: forewing with two black-bordered white subbasal bands, a small spot in middle of cell, a large irregular-shaped spot from end of cell, and four irregular outer spots: hindwing with the basal half white, enclosing a black-bordered ochreous spot at end of cell; outer half brownish ochreous-yellow, with two elongated black-bordered white spots. Cilia white, with a slender blackish inner line. Tegulæ white bordered; abdomen with white dorsal bands, which are slightly bordered with black speckles; legs white; fore and middle tibiæ cinereous-brown.

Expanse $1\frac{1}{10}$ to $1\frac{2}{10}$ inch.

Genus POLYTHLIPTA.

Polythlipta, Lederer, Pyral. Wien. Ent. Monat. vii. p. 389 (1863).

Male. Forewing long, triangular, exterior margin very oblique; cell half the length, narrow; first subcostal at one-third before end of the cell, second from angle close to end, trifid, fifth from the end, running very close to second near the base; discocellular slightly concave, radials from the ends; two upper medians from end of cell, lower at nearly one-fourth; submedian bent upward near the base, with a short lower branch from its base, which rejoins it at one-third its length: hindwing broad, triangular; cell about one-third the length; two subcostals from a short footstalk beyond the cell, upper partly joined to the costal; discocellular concave, radial from lower end; two upper medians from end of cell, lower close to the end; a submedian and two internal veins. Body slender, abdomen long, extending much beyond hindwings, apex tufted; labial palpi porrect, broad, compressed, laxly pilose beneath, third joint half length of second, cylindrical; maxillary palpi short; antennæ slender, filiform; legs long, slender, fore tibiæ and basal tarsi thickly clothed with long laterally-spreading hairs; spurs slender, unequal in length.

Type, P. macralis.

POLYTHLIPTA MACRALIS.

Polythlipta macralis, Lederer, Pyral. Wien. Ent. Monat. vii. pp. 389, 477, pl. 12, f. 14 (1863), ♂.

Ochreous-white. Wings semi-diaphanous, opalescent: forewing with an indistinct pale cupreous-brown inwardly-oblique zigzag antemedial and a postmedial band, and a similar marginal band: hindwing with a similar indistinct discal and marginal band. Abdomen with brownish bands; palpi brown above.

Expanse ♂ $1\frac{5}{10}$ inch.

POLYTHLIPTA DIVARICATA (PLATE 179, FIG. 16 ♀, 16*a* larva).

Olivaceous yellowish-white. Wings semi-diaphanous, opalescent: forewing with the costal border ochreous-yellow; an ochreous-yellow blackish-speckled basal patch, an irregular striped antemedial band, which extends outwardly along the median, up end of the cell, and along the upper median to the middle of a transverse discal angular band; the latter band partly confluent with a densely black-speckled apical band, from which a submarginal line extends to the posterior angle: hindwing with a slight black broken streak at end of the cell, a slender interrupted irregular discal line, an apical patch, and a smaller patch on middle of the exterior margin. Thorax and base of abdomen white, speckled with brown; abdomen above, head, palpi, and legs white, fore and middle tibiæ with brownish-ochreous band.

Expanse, ♂ 1 $\frac{2}{8}$, ♀ 1 $\frac{3}{8}$ inch.

Larva slender; olive-green; anterior segments ochreous; with a lateral medial darker green band. Pupa green; with a short anal point and pedal sheath.

"Feeds on Phaseolus" (*Thwaites*).

Genus HARITALA.

Notarcha,* Meyrick, Trans. Ent. Soc. Lond. 1884, p. 310.

Male. Forewing shorter and broader than in *Pycnarmon;* cell extending to half the length; first subcostal emitted at one-third before end of the cell, second free, third bifid, fifth from end; discocellular concave, radials from near middle and lower end; two upper medians from end of cell, lower at one-fourth; submedian straight, with a short curved slender lower vein from its base: hindwing less triangular than in *Pycnarmon*, apex and exterior margin convex; cell less than one-third the length; two subcostals from a short distance beyond the cell, upper partly joined to costal; discocellular very concave, radial from close to lower end; two upper medians from end of cell, lower at one-third; submedian and two internal veins straight. Thorax rather stout; abdomen slender and elongated in male, anal tuft slender; labial palpi obliquely ascending, rather broad laterally, laxly squamous, tip minute, pointed; maxillary palpi short, slender; antennæ with fine short ciliæ; fore and middle tibiæ squamous; spurs slender, inner spurs long.

Type. H. Cassusalis.

HARITALA CASSUSALIS.

Zebronia Cassusalis, Walker, Catal. Lep. Het. B. M. xvii. p. 477 (1859).
Zebronia aurolinealis, Walker, Catal. Lep. Het. B. M. xvii. p. 478 (1859)—♀ *only.*
Zebronia amœnalis, Walker, *id.* xxxiv. p. 1352 (1865).
Botys signatalis, Walker, *id.* xxxiv. p. 1444 (1865).
Bots faustalis, Lederer, Pyral. Wien. Ent. Monat. vii. pp. 375, 471, pl. 10, fig. 15 (1863).
Notarcha cassalis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 311.

Glossy white: forewing crossed by five inwardly-oblique dark ochreous-yellow

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* Notarchus previously used for a genus of Mollusca.

bands; the three inner bands straight, the fourth curved outward beyond the cell and includes a streak at end of the cell, the fifth band submarginal and curved before the apex; three black dots on the costa and a dentate spot at end of the cell: hindwing crossed by three similar yellow bands, the middle band being discal and curved outward beyond the cell. Cilia with a pale yellow inner line. Thorax and abdomen with yellow bands; forelegs with black bands; middle femora tipt with black.

Expanse $\frac{5}{8}$ to $\frac{6}{8}$ inch.

HARITALA TIGRINA (Plate 182, Fig. 5).

Pale glossy straw-yellow: forewing crossed by five narrow ochreous-yellow bands, the outer band being the broadest and diffused along the margin; a single slender brown marginal line; a black costal spot at end of the first, third, and fifth bands, and an oval spot at end of the cell: hindwing crossed by four yellow bands, which unite at the anal angle, the outer band being broadest and diffused; a single slender brown marginal line. Cilia cinereous-white, traversed by a very pale brown line. Thorax and abdomen with ochreous-yellow bands; a black band on penultimate segment; forelegs with black bands.

Expanse $\frac{8}{10}$ to 1 inch.

Smaller than *H. plutusalis*, with narrower bands, and only one brown marginal line.

Genus ARIPANA.

Conchylodes, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 309 (*nec* Guénee).

Male. Forewing comparatively broader than in typical Pycnarmon; exterior margin less oblique: hindwing somewhat narrower. Venation similar. Body slender, abdomen elongated, anal tuft slender; palpi smaller, apex slender and more acute; antennæ slender, setaceous; legs long, smooth, spurs slender, unequal in length.

Type, A. Caberalis.

ARIPANA CABERALIS.

Spilomela caberalis, Guénee, Delt. et Pyral. p. 284 (1854).
Zebronia cabiralis, Walker, Catal. Lep. Het. B. M. xvii. p. 482 (1859).
Conchylodes caberalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 443 (1863).
Zebronia abdicalis, Walker, Catal. Lep. Het. B. M. xvii. p. 480 (1859).
Conchylodes abdicalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 443, pl. 17, fig. 12 (1863).

Glossy yellowish-white. Forewing crossed by an antemedial and a postmedial incomplete indistinct ochreous-brown line, the latter curved inward below the cell; three black basal costal spots and two curved marks before the apex, the intervening costal spaces with short black streaks; a black lunate mark at end of the cell, a small

subbasal spot, a spot at lower end of each line, one above posterior angle, and another at the apex; the exterior margin being also slightly bordered with ochreous-brown: hindwing with a transverse ochreous-brown waved line, a black spot at end of the cell, one at the apex, one on middle of exterior margin, and another above anal angle. Thorax with three black spots, two at base of abdomen, and a black band with ochreous border on penultimate segment, the tip also lined with ochreous; fore tibiæ with black bands.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

ARIPANA MERITALIS.

Zebronia meritalis, Walker, Catal. Lep. Het. B. M. xvii. p. 479 (1859).
Conchylodes meritalis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 310.
Conchylodes baptalis, Snellen, Tijd. voor Ent. 1880, p. 238; 1884, p. 44, pl. 4, fig. 7.

Glossy white. Forewing with two transverse incomplete indistinct yellow lines, the first line antemedial, the other discal and recurved; a black basal and a subbasal costal spot, a dot at base of the cell, a dentate spot at end of the cell, another above the posterior angle, and a dot at base of the posterior margin; the exterior margin from the apex also black bordered; on the costa before the apex are two black curved marks: hindwing with a recurved discal yellow line, a black spot at end of the cell, one at the apex, one before the anal angle, and another above the angle. Abdomen with two black basal spots; forelegs with blackish bands.

Expanse $\frac{7}{10}$ inch.

ARIPANA LACTIFERALIS.

Zebronia lactiferalis, Walker, Catal. Lep. Het. B. M. xvii. p. 480 (1859).

Glossy white. Forewing with two transverse incomplete yellow lines: two small black spots at base of the costa, two oval marks before the apex, a spot in middle of the cell, a larger spot at its end, a spot above the posterior angle, and a minute dot at the base: hindwing with a black spot at end of the cell, one above anal angle, and another on middle of the exterior margin. Thorax with a black spot in the middle, two at base of the abdomen, and a band on penultimate segment. Fore tibiæ with black bands.

Expanse $\frac{9}{10}$ inch.

Genus PAGYDA.

Pagyda, Walker, Catal. Lep. Het. B. M. xvii. p. 487 (1859).

Male. Forewing rather short, broad, triangular; cell half the length; first subcostal emitted at one-sixth before end of the cell, third bifid, fifth from end; discocellular concave, radials from close to each end; two upper medians from end of cell, lower at one-fourth; submedian with a short lower recurved branch from the base: hindwing short, broad, somewhat quadrate, anal angle truncate; cell one-third the length; subcostals from end; discocellular outwardly concave, radial from lower

end; two upper medians from end of cell, lower at nearly one-third; a submedian and two internal veins. Body slender, abdomen attenuated; forehead ridged at the sides; labial palpi porrect, very broad, compressed, rounded and fringed in front, third joint rather long, acicular, decumbent; maxillary palpi distinct, ascending, apex triangular; antennæ slender, very minutely serrated; legs long, smooth, slender, spurs unequal.

PAGYDA SALVALIS (Plate 182, Fig. 6).

Pagyda salvalis, Walker, Catal. Lep. Het. B. M. xvii. p. 487 (1859).

Cinereous-yellow, glossy: forewing crossed by two reddish-ochreous outwardly-oblique basal, an antemedial and a medial band, an inwardly-oblique short upper postmedial band, and a recurved submarginal band; the third, fourth, and fifth bands each ending in a black costal spot: hindwing with a similar coloured medial and submarginal band. Thorax and abdomen with reddish-ochreous bands; frontal tuft white, ridged at the sides; palpi reddish-ochreous with two cinereous-brown outwardly-curved bands, basal joint white; forelegs reddish-ochreous, with white bands; middle and hind legs whitish, with slight blackish tarsal bands. Cilia with an ochreous inner line.

Expanse $\frac{5}{10}$ inch.

Genus CANGETTA.

Wings small. Forewing broad, apex acute, exterior margin slightly oblique and convex; cell half the length; first subcostal not visible, second quadrifid, the third and fourth thrown off near the apex, the fifth from below second at half-way between its base and the third; discocellular slender, slightly concave, upper radial from close to upper end, lower radial and two upper medians on a footstalk beyond end of the cell (the lower radial being emitted from upper median at more than half its length); lower median at one-fifth before end of the cell; submedian recurved, with a slender lower recurved branch: hindwing rather long, exterior margin and anal angle very convex; cell about one-third the length; two subcostals from end of cell, upper joined to costal to half its length; discocellular slender, slightly concave; two upper medians from end of the cell, the radial being emitted from the upper median at more than half its length; lower median close to end of cell; submedian and internal vein straight. Body slender, tuft pointed; labial palpi curved, rather narrow, second joint laxly squamous, third joint about half length of second, slender, pointed; maxillary palpi squamous, reaching almost to end of labial; antennæ submoniliform, slightly serrate at the tip: legs slender, smooth, spurs long, unequal.

CANGETTA RECTILINEA (Plate 182, Fig. 8).

Cinereous-white: forewing with the base of costa minutely brown scaled;

crossed by a slender brown antemedial line, an inwardly-oblique straight postmedial line, and a marginal dentated line; the area bordering the postmedial line slightly clouded with cinereous-brown scales; a slight spot at end of cell: hindwing with a slight brown spot at end of the cell; a brown discal line, which is slightly bent inward before its lower end, followed by a marginal line; the discal and submarginal area slightly clouded with minute cinereous-brown scales. Front of head, tip and base of palpi, and legs white; fore tibiæ pale brown; abdomen speckled with brown scales.

Expanse $\frac{6}{12}$ inch.

Genus SYNCLERA.

Synclera, Lederer, Pyral. Wien. Ent. Monat. vii. p. 444 (1863).
Notarcha, Sect. B., Meyrick, Trans. Ent. Soc. Lond. 1884, p. 312.

Forewing elongated, somewhat triangular; exterior margin oblique, slightly convex; cell more than half the length; first subcostal emitted at one-fourth before end of the cell, third bifid, fifth curved upward from the end; discocellular concave, radials from near the ends; middle median from angle close to end, lower at one-fourth; submedian nearly straight, with a lower slender recurved vein extending to half its length: hindwing short, broad, triangular; exterior margin slightly convex; subcostals from the end, upper partly joined to the costal; cell one-third the length; discocellular concave, radial from lower end; two upper medians from end, lower at one-third; submedian and two internal veins widely separated. Body slender; abdomen extending nearly half its length beyond hindwings; anal tuft narrow; labial palpi broad, obliquely ascending, clothed with fine lax hairy scales, tip minute, obtuse; maxillary palpi short; antennæ setaceous; legs long, slender, spurs unequal.

Type, S. traducalis.

SYNCLERA MULTILINEALIS.

Botys multilinealis, Guénee, Delt. et Pyral. p. 337, pl. 8, fig. 11 (1854); Walker, Catal. Lep. Het. B.M. xviii. p. 661; Lederer, Pyral. Wien. Ent. Monat. vii. p. 85, pl. 11, fig. 3 (1863).
Notarcha multilinealis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 312.
Zebronia salomealis, Walker, Catal. Lep. Het. B. M. xvii. p. 476 (1859); *id.* xxxiv. p. 1348.
Botys annuligeralis, Walker, *id.* xxxiv. p. 1424 (1865).

Very pale olivaceous-yellow, opalescent in some lights: forewing with some olive-brown basal spots and streaks, a transverse curved antemedial line, an irregular postmedial denticulated line, and a submarginal denticulated line; an oval orbicular and reniform mark, and a mark below the cell: hindwing with two irregular discal, and a submarginal denticulated line, a mark at end of the cell, below which is a short streak, a marginal line and an interciliary line olive-brown. Thorax with olive-brown spots, abdomen with paler bands, and a penultimate black spot; palpi and legs whitish; palpi and forelegs with brown bands.

Expanse $\frac{9}{10}$ to $1\frac{1}{10}$ inch.

SYNCLERA TRADUCALIS (Plate 182, Fig. 9, ♀).

Eudioptis traducalis, Zeller, Lep. Micro. Caffr. Kongl. Vet. Akad. Handl. 1852, p. 54.
Synclera traducalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 445 (1863).
Spilomela retinalis, Lederer, Wien. Ent. Monat. i. p. 100 (1857).
Glyphodes univocalis, Walker, Catal. Lep. Het. B. M. xvii. p. 499 (1859).

Pale olivaceous ochreous-yellow, semidiaphanous, opalescent in some lights: forewing crossed by an ochreous-brown basal, a decussated subbasal, three outwardly-oblique medial, two postmedial, and a discal line, followed by a marginal band containing a series of white streaks; the lines partly confluent both anteriorly and posteriorly: hindwing with an ochreous-brown medial line ending in an oval mark at end of the cell, a discal line, and a marginal band containing a series of white streaks. Cilia ochreous-brown. Thorax and abdomen with ochreous-brown bands; forelegs and hind tarsi with brown bands.

Expanse, ♂ $\frac{8}{10}$, ♀ $\frac{9}{10}$ to $1\frac{1}{10}$ inch.

SYNCLERA CÆSALIS (Plate 183, Fig. 7, ♀).

Glyphodes Cæsalis, Walker, Catal. Lep. Het. B. M. xvii. p. 499 (1859).

Pale dull ochreous-yellow: forewing crossed by a blackish-bordered ochreous subbasal, antemedial, medial, and a discal band; the three outer bands dilated at their costal end, and each band joined together posteriorly; bordering the outer band is an exterior curved catenulated row of spots; a black dot in middle of the cell, some streaks below the apex, and a slender marginal line: hindwing with a blackish slender streak from end of the cell, a black-bordered ochreous medial band, a slender discal line and a marginal line; the middle band and discal line confluent at the anal angle; some streaks below the apex. Thorax with blackish-bordered ochreous streaks, and two longitudinal dorsal lines which also extend partly down the abdomen; anal tuft blackish; palpi and legs with blackish bands.

Expanse $\frac{9}{10}$ to $1\frac{1}{10}$ inch.

SYNCLERA BRAUREALIS.

Zebronia Braurealis, Walker, Catal. Lep. Het. B. M. xix. p. 971 (1859).

Cinereous-white, semihyaline, opalescent: forewing crossed by a cinereous-brown basal line, three duplex inner lines, a duplex medial line, a short outwardly-oblique upper discal duplex line, a submarginal line, and a single marginal line; the medial line enclosing an irregular-shaped streak: hindwing with a medial band containing a white space at end of the cell, an irregular submarginal, and a macular marginal band. Cilia with a brown inner line. Thorax with cinereous-brown streaks; a black band on anal segment; palpi and legs with brown bands.

Expanse $\frac{7}{10}$ inch.

Genus CHABULA.

Male. Forewing elongated, triangular; cell half the length; first subcostal emitted at one-fifth before end of the cell, third bifid, fifth from the end; discocellular very concave, radials from close to each end; two upper medians from end of cell, lower at nearly one-third: hindwing triangular, exterior margin very oblique, slightly convex in the middle; cell two-fifths the length; two subcostals from the end; discocellular outwardly oblique, concave, radial from lower end; two upper medians from end of cell, lower at one-third. Body slender; thorax coarsely squamous, tegulæ clothed with long lax spatular scales; labial palpi rather short, laterally broad, oblique, not reaching the vertex, pilose in front, second joint truncated, third joint minute, conical; maxillary palpi distinct, oblique, reaching end of the labial; antennæ ciliated; legs rather slender, smooth, outer spurs short.

Type, C. Acamasalis.

CHABULA ACAMASALIS.

Zebronia Acamasalis, Walker, Catal. Lep. Het. B. M. xix. p. 970 (1859).
Zebronia perspicualis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1347 (1865).
Botys flexissimilis, Walker, *id.* p. 1426 (1865).
Heterocnephes strangulalis, Snellen, Tijd. voor Ent. 1880, p. 224; id. 1884, p. 35, pl. 3. f. 1.

White: forewing crossed by a broad violaceous-brown subbasal, medial, and an apical outwardly-oblique band, the antemedial and postmedial white area also traversed by a narrow brown parallel line; the brown bands with indistinct whitish posterior marks, the mark on the middle band being curved: hindwing with a broad interrupted marginal brown band, an irregular discal band, two convergent narrow inner bands, and a streak at end of the cell. Cilia alternate white and brown, with brown inner line. Head, thorax, and abdomen with longitudinal brown bands; palpi and forelegs with transverse brown bands.

Expanse $\frac{7}{10}$ to $\frac{9}{10}$ inch.

Genus OMPHISA.

Forewing subfalcate; apex acute; exterior margin slightly denticulated, and almost angular in the middle; cell long, extending three-fifths the length; first subcostal emitted at two-fifths before end of the cell, third bifid, fifth from the end; discocellular outwardly oblique, radials from near the ends; middle median very close to the end, lower at one-fourth; submedian with a slender recurved lower branch extending to half its length: hindwing somewhat quadrate, rather narrow; apex convex, exterior margin slightly denticulated, convexly angular in the middle; cell nearly half the length; subcostals from the end, upper partly joined to the costal; discocellular concave, radial from lower end; two upper medians from

extended end of cell, lower about one-fourth; a submedian and two internal veins. Body moderately stout, abdomen extending beyond hindwings, with lateral apical tufts in male: labial palpi porrect, moderately broad, squamous, extending half beyond the head, third joint short; maxillary palpi very distinct, rather long; antennæ stout, broadly ciliated in male; legs rather stout, tibiæ squamous, spurs unequal.

OMPHISA ILLISALIS (Plate 183, Fig. 4).

Botys illisalis, Walker, Catal. Lep. Het. B. M. xviii. p. 653 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 371, pl. 9, fig. 12.

Male. Dingy ochreous-white: forewing with the basal area brownish-ochreous; crossed by a brown antemedial curved line, and an irregular discal brown-bordered angulated macular band, the upper portions of which are semihyaline; a quadrate brown-bordered hyaline spot in middle of the cell, another at its end, and three lower discal confluent spots: hindwing mostly semihyaline; with a short basal brownish-ochreous band; a quadrate brown-bordered ochreous patch at end of the cell, from which a brown-speckled line extends to middle of abdominal margin; beyond is a brown-bordered ill-defined macular band, which is anteriorly and posteriorly confluent with a brownish-ochreous marginal line. Cilia alternated with brownish-ochreous. Body brownish-ochreous; abdomen brown speckled, with whitish basal dorsal spots; anal tufts brown; legs speckled with brown.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{4}{10}$ inch.

Genus ANALTES.

Analtes, Lederer, Pyral. Wien. Ent. Monat. vii. p. 407 (1863).

Male: forewing elongate, triangular; cell more than half the length; first subcostal emitted at one-fourth before end of the cell, second close to end, trifid, fifth from end; discocellular concave, radials from close to the end; middle median close to end, lower at nearly one-fifth; submedian curved upward, with a slender recurved lower branch: hindwing short, broad, exterior margin convex; cell one-third the length; subcostals from end; discocellular concave, radial from lower end; two upper medians from end of cell, lower at one-fourth; a submedian and two internal veins. Thorax stout; abdomen long, attenuated at the tip; labial palpi erect, slender, squamous, second joint reaching to the vertex, third joint short; antennæ thickened at the base of shaft, ciliated, basal joint with a short tuft in front; legs rather stout, long, fore and middle tibiæ pilose above, spurs long, unequal.

Type, A. semitritalis.

ANALTES IDYALIS (Plate 183, Fig. 5).

Botys Idyalis, Walker, Catal. Lep. Het. B. M. xix. p. 996 (1859).

Purplish cinereous-brown, glossy: forewing crossed by a brown antemedial curved line, and an irregular postmedial line, which is bent inward to lower end of the cell and thence descends to posterior margin near end of inner line; the intermediate area from the costa to the median vein pale yellow and opalescent, the traversing veins being ochreous; a brown punctiform spot in middle of cell and an oblique streak at the end; bordering the discal line is a submarginal straight row of yellow oval spots, the four lower of which are very small: hindwing pale yellow at the base. Cilia cinereous-brown. Body purplish-cinereous; sides and front of thorax, head, base of palpi, and legs yellowish; a band on fore tibiæ, and streak along middle tibiæ dark brown; palpi above brown.

Expanse ♂ $\frac{9}{10}$ to 1 inch.

ANALTES DISJUNCTALIS.

Botys disjunctalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1408 (1865).

Pale yellow, opalescent: forewing with a brown streak along the costa, which is darkest at the base; crossed by a dark brown antemedial recurved line, and an irregular postmedial line, the latter bent inward to below the cell; a brown spot in the cell and a streak at the end; outer border ochreous-brown, encompassing a row of yellow spots bordering the discal line; veins streaked with ochreous: hindwing with a brown streak from below end of the cell, a short discal denticulated line, and a brown marginal border. Cilia cinereous-brown. Body, palpi, and legs above yellowish, slightly streaked with ochreous; fore tibiæ with a blackish band.

Expanse ♀ $\frac{9}{10}$ inch.

Note.—This may probably be the female of A. Idyalis.

Genus NOSOPHORA.

Nosophora, Lederer, Pyral. Wien. Ent. Monat. vii. p. 407 (1863).

Male: forewing elongated; cell half the length; first subcostal at one-fifth before end of the cell; second and third hardly separable at the base, third bifid, fifth from end; discocellular concave, radials from near the ends; middle median close to end, lower at one-fifth; submedian with a slender lower recurved branch: hindwing short, triangular; cell one-third the length; subcostals from beyond the cell, upper partly joined to costal; discocellular bent, short, radial from near lower end; middle median from angle in a line with discocellular below the upper, lower median at one-third; a submedian and two internal veins; on the underside, extending from near the base of cell to middle of the disc, is a broad adpressed fringe of

long hairy scales. Thorax rather stout, tegulæ fringed with very long silky hairs; abdomen keeled above, attenuated, apex pointed; labial palpi curved upward, reaching above the vertex, squamous at the sides, apex pointed, second joint with a dense plumose tuft of long curly hairs curved upward in front; maxillary palpi short; antennæ setaceous, finely ciliated; legs long, fore and middle femora finely fringed beneath, tibiæ clothed with short fine hairy scales; hind tibiæ with a dense tuft above at the end and with a tufted appendage projecting from base of posterior spurs, basal tarsi densely pilose, spurs slender, unequal. Palpi in female slender, not tufted, hindlegs not tufted.

Type, N. Chironalis (*Botys Chironalis*, Walker).

NOSOPHORA QUADRISIGNATA (Plate 183, Fig. 6).

Male. Ochreous-brown: forewing with a large blackish-bordered hyaline-white upper discal transverse spot, which is excavated on its outside near upper end, a small almost white spot before end of the cell: hindwing with a large blackish-bordered hyaline-white broadly ovate discal spot. Body and legs paler; a dense tuft of cinereous-black hairs curved upward from front of palpi, and a tuft of long black-tipt hairs extending from sides of thorax on the underside; hindlegs not tufted.

Female. Brownish-ochreous, the exterior borders clouded with brown: forewing crossed by two very indistinct blackish outwardly-oblique medial lines; discal white spots, and hindwing as in male.

Expanse ♂ ♀ 1 to $1\frac{1}{10}$ inch.

Genus GLYPHODES.

Glyphodes, Guénee, Delt. et Pyral. p. 292 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 496 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 401 (1863); Meyrick, Trans. Ent. Soc. Lond. 1884, p. 297.

Male. Forewing elongate, triangular; cell fully half the length; first subcostal emitted at one-third before end of the cell, third bifid, fifth from the end; discocellular slightly concave in the middle, bent near each end, radials from the angles; middle median close to end of cell, lower at one-fifth; submedian bent upward near the base, with a short lower recurved branch which rejoins it at two-fifths its length: hindwing broad, triangular, anal angle convex; cell broad, one-third the length; subcostals on a short footstalk beyond the cell; discocellular outwardly concave, radial from close to lower end; two upper medians from end of cell, lower at one-fourth; a submedian and two internal veins. Body rather stout, abdomen extending beyond hindwings; tegulæ edged with long broad spatular scales; labial palpi porrect, rather decumbent, second joint very broad, rounded, compressed, compactly

squamous-hirsute, third joint very short, decumbent, almost concealed; maxillary palpi oblique, slender, laxly squamous, truncate at the tip; antennæ slender, very minutely ciliated; legs smooth, rather slender, long, spurs unequal.

Type, G. *Stolalis.*

GLYPHODES BICOLOR.

Botys bicolor, Swainson, Zool. Illust. 1st ser. II. pl. 77. fig. 2 (1821).

Eudioptis perspicillalis, Zeller, Lep. Micro. Caffr. Kongl. Vet. Akad. Handl. (1852), p. 53.

Glyphodes perspicillalis, Meyrick, Trans. Ent. Soc. Lond. (1884), p. 299.

Glyphodes diurnalis, Guénee, Delt. et Pyral. p. 294, pl. 5. f. 5 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 498; Lederer, Pyral. Wien. Ent. Monat. vii. p. 402.

Glyphodes parvalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1355 (1865).

Forewing cupreseent fuliginous-brown; crossed by a black-bordered hyaline opalescent-white medial band, which is joined to a white streak along base of the posterior margin, followed by a moderate-sized oval discal spot and a contiguous dentate costal spot; cilia partly white: hindwing hyaline opalescent-white, with a black-bordered broad brown marginal band; cilia white. Middle of thorax and abdomen above brown, tip black, tegulæ, fringe of palpi, body beneath, and legs, white; fore and middle femora and tibiæ brown; base of palpi brown.

Expanse $\frac{8}{10}$ inch.

GLYPHODES PYLOALIS (Plate 180, Fig. 3).

Glyphodes Pyloalis, Walker, Catal. Lep. Het. B. M. xix. p. 973 (1859).

Forewing ochreous-brown; with a short broad antemedial and a postmedial blackish-bordered hyaline opalescent-white band, followed by a discal recurved slender similar line, which is outwardly dentated near its costal end; between the two bands is a lower medial round black spot ringed with white; the base and middle of posterior margin also white; cilia edged with white: hindwing hyaline opalescent-white, with a broad brown marginal band with a slender black inner bordered line; cilia edged with white. Palpi, middle of thorax, and abdomen above brown, tuft black; tegulæ, base of palpi, body beneath, and legs, white; forelegs brownish above.

Expanse $\frac{9}{10}$ inch.

GLYPHODES STOLALIS.

Glyphodes Stolalis, Guénee, Delt. et Pyral. p. 293, pl. 3, fig. 11 (1854); Walker, Catal. Lep. Het. B.M. xvii. p. 497; Lederer, Pyral. Wien. Ent. Monat. vii. p. 401; Snellen, Tijd. voor Ent. 1883, p. 143.

Wings hyaline-white, opalescent: forewing crossed by two subbasal and a post-medial outwardly-oblique black-bordered cupreseent ochreous-brown band, a similar discal, and a broader marginal band, each centred with a parallel brown streak, the

middle band posteriorly joined to the discal and enclosing a hyaline white reniform mark; the two outer bands also partly confluent: hindwing with a black-bordered cupreseent ochreous-brown streak at end of the cell, a slender discal band, and a confluent broad marginal band, the latter brown-streaked. Cilia white, partly interlined with brown. Body white, with ochreous-brown longitudinal bands; anal tuft black; palpi with ochreous and brown bands, base white; femora and tibiæ white, with brown bands, tarsi brownish at the lips.

Expanse $1\frac{3}{10}$ inch.

GLYPHODES ACTORIONALIS (Plate 180, Fig. 1, ♂).

Glyphodes Actorionalis, Walker, Catal. Lep. Het. B. M. xvii. p. 498 (1859).

Forewing dark cupreseent-brown, with an outwardly-oblique hyaline opalescent-white oval medial spot, before which is a very much smaller spot within the cell, beyond it is a much larger discal spot, and a small subafical costal dentate spot; from the latter descends a very slender indistinct submarginal line; posterior margin white to near the end: hindwing hyaline opalescent-white, with a moderately narrow cupreseent-brown marginal band; cilia white. Body above cupreseent-brown; tegulæ, base of palpi, legs, and body beneath, pure white; palpi above dark brown; fore and middle femora and tibæ brownish above.

Expanse $1\frac{1}{10}$ to $1\frac{4}{10}$ inch.

GLYPHODES BIVITRALIS (Plate 180, Fig. 2, 2*a* larva).

Glyphodes bivitralis, Guénee, Delt. et Pyral. p. 293 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 496; Lederer, Pyral. Wien. Ent. Monat. vii. p. 402.

Forewing purplish ochreous-brown, with an outwardly-oblique hyaline opalescent-white pyriform medial spot, and a very large discal spot, the latter being irregularly angled on its outer edge; between the two white spots is a small lower white-ringed black spot; before the inner spot is a slender transverse indistinct black-bordered white line ending in a white streak along base of posterior margin; at base of the cell is also an indistinct blackish dot; beyond the discal spot is a slender transverse line, and the outer margin has a blackish-bordered glaucescent fascia; cilia cinereous brown: hindwing hyaline opalescent-white, with a moderately broad black-bordered ochreous-brown marginal band with a similar glaucescent fascia; cilia white, with ochreous-brown inner line. Middle of thorax, abdomen above, palpi above, and anal tuft blackish; forelegs and middle tibiæ above ochreous-brown; base of palpi, legs, and body beneath white.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{3}{10}$ inch.

"Colombo, December" (*Mackwood.*)

Larva rather stout, attenuated at the ends; olive brown, palest beneath; head

reddish, and with a black lateral streak; a dorsal, subdorsal, and a lateral row of white dots, the latter with a few fine short radiating white hairs; some black dots on anterior and posterior segments. Pupa pale olivaceous-red; with an acute anal point and lengthened pedal sheath.

"Feeds on Ficus oppositifolia" (*Thwaites*).

GLYPHODES ITYSALIS (Plate 180, Fig. 4).

Glyphodes Itysalis, Walker, Catal. Lep. Het. B. M. xvii. p. 501 (1859), ♂.

Forewing purplish ochreous-brown, with an outwardly-oblique blackish-bordered hyaline opalescent-white short costal antemedial band, and a broader erect postmedial band, the latter partly confluent with a straight slender similar line, which is outwardly bordered by an opalescent fascia; a similar white band from base of posterior margin, followed by a dentate spot below the antemedial band; the brown oblique upper basal area traversed by a slender white line, and the medial area by a metallic blue streak; cilia white from below the apex: hindwing hyaline opalescent-white, with a broad brown marginal band, which is inwardly bordered by a black duplex line with an outer opalescent fascia; cilia white, with an inner brown line at the anal angle. Palpi, middle of thorax and abdomen above brown; anal tuft black; tegulæ, base of palpi, body beneath, and legs white; forelegs ochreous, with a brown band on tibiæ.

Expanse 1 inch.

Genus EUDIOPTIS.

Eudioptis, Hübner, Verz. bek. Schmett. p. 359 (1825-7); Stephen's, Illust. Ent. Haust. iv. p. 43 (1834).

Phakellura, Guilding, MS. Westwood, Int. Ent. 11, p. 401 (1840); Guénee, Delt. et Pyral. p. 294; Walker, Catal. Lep. Het. B. M. xviii. p. 509.

Phacellura, Lederer, Pyral. Wien. Ent. Monat. vii. p. 400 (1863); Meyrick, Trans. Ent. Soc. Lond. 1884, p. 297.

Forewing lanceolate, rather narrow; cell long, three-fifths the length; first subcostal emitted at one-fourth, second and third from angle close to end, hardly separable at their base, third bifid, fifth from end of cell; discocellular concave, radials from near the ends; middle median very close to end of cell, lower at one-fourth; submedian bent near the end: hindwing triangular; cell one-third the length; subcostals from end; discocellular concave, radial from its extreme lower end; two upper medians from extended end of cell, lower at one-fourth; a straight submedian and two internal veins. Body rather stout, abdomen cylindrical, anal tuft in male, large, composed of dense plumose and spatular divergent hairs; labial palpi ascending, broad, rounded in front, compressed, laxly squamous, third joint

very short; maxillary palpi erect, truncate at the tip, distinct; antennæ simple; legs long, slender, smooth, spurs long, unequal.

Type, E. hyalinata.

EUDIOPTIS INDICA.

Eudioptis indica, Saunders, Trans. Ent. Soc. Lond. 1851, p. 163, pl. 12, fig. 5, 6, 7; Zoologist, ix. p. 3070.

Phakellura indica, Walker, Catal. Lep. Het. B. M. xviii. p. 514; Snellen, Tijd. voor. Ent. 1883, p. 141.

Phacellura indica, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 297.

Phakellura Gazorialis, Guénee, Delt. et Pyral. p. 297; Semper, Verh. Zool. Bot. Gesc. 1867, p. 702.

Phacellura Gazorialis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 400.

Wings hyaline-white, opalescent; forewing with a broad cupreous-brown costal band and an exterior marginal band: hindwing with a similar exterior marginal band. Cilia cinereous-brown. Thorax, head, palpi above, and penultimate segment of abdomen above, cupreous-brown; base of palpi, thorax, base of abdomen above and beneath, and legs white; anal tuft ochreous, tipt with brown.

Expanse $\frac{9}{10}$ to 1 inch.

Genus MARGARONIA.

Margaronia, Hübner, Verz. bek. Schmett. p. 358 (1825-7); Walker, Catal. Lep. Het. B. M. xviii. p. 518.

Margarodes, Guénee, Delt. et Pyral. p. 301 (1854); Lederer, Pyral. Wien. Ent. Monat. vii. p. 398; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 296.

Male. Wings smooth, silky, diaphanous, opalescent: forewing moderately long, triangular, costa much arched towards the end, apex acute, exterior margin oblique; cell narrow, more than half the length; first subcostal fully half before end of the cell, second and third close to end, hardly separable at their base, third bifid, fifth from end, curved upward from the base and almost touching third; discocellular outwardly-oblique, slightly concave, radials from close to the ends; middle median close to end of cell, lower at nearly one-third; submedian bent upward near the base, and with a recurved lower slender branch rejoining it beyond one-third its length: hindwing short, broad, triangular, exterior margin very slightly convex; cell two-fifths the length; subcostals from slightly beyond the end, upper partly joined to costal; discocellular outwardly oblique, almost bent in middle, radial from lower end; two upper medians from end, lower at one-fifth; a nearly straight submedian and two internal veins. Body smooth, silky, moderately stout; abdomen keeled above, anal tuft pointed, compact; labial palpi porrect, projected more than half beyond the head, broad, smoothly clothed, pointed in front, third joint concealed; maxillary palpi broad at the apex; antennæ slender,

filiform; legs slender, smooth, inner spurs very long and slender, outer spurs short.

Type, M. unionalis.

MARGARONIA GLAUCULALIS (PLATE 181, FIG. 2, ♂, 2*a* larva).

Margarodes glauculalis, Guénee, Delt. et Pyral. p. 306 (1854); Lederer, Pyral. Wien. Ent. Monat. vii. p. 398 (1863).

Margaronia glauculalis, Walker, Catal. Lep. Het. B. M. xviii. p. 532 (1859).

Pale glaucous-green. Wings with opalescent reflections; with an indistinct marginal row of minute black lunular points: forewing with the costal border from base to near the tip ochreous, and a very slender indistinct black streak on middle of the discocellular. Sides and front of thorax, vertex, palpi above, and bands on fore and middle tibiæ bright ochreous; base of palpi and legs white; anal tuft in male black.

Expanse $1\frac{1}{8}$ to 2 inches.

Larva stout; pale olivaceous-ochreous, blotched with reddish ochreous, spotted with small black worts; front legs black. Pupa red, with blackish anterior streaks, abdominal bands and spiracles; with an acute anal point, prominent curved lingual and a short pedal sheath.

"Feeds on Taberna montana." (*Thwaites.*)

MARGARONIA CELSALIS (PLATE 181, FIG. 4).

Botys Celsalis, Walker, Catal. Lep. Het. B. M. xviii. p. 654 (1859).

White. Wings semihyaline, opalescent: forewing with a brownish-ochreous costal band which joins a brown-bordered pale yellow streak at base of the cell, a quadrate spot across its middle, and an elongated spot at its end; a smaller similar spot below the cell, situated between the two last; each spot bordered by a narrow brown line; an ochreous-brown undulated denticulated discal line, and a marginal row of black dots: hindwing with a brown dot in middle of the cell, an oval brown-bordered yellow spot with its lower point black tipt, at end of the cell; an undulated discal line, and a marginal row of black points. Thorax and head above pale yellow; sides of thorax, vertex, and palpi above ochreous-brown, the palpi above also edged with black; a streak along fore and middle femora and band on fore tibiæ and the apical joint of their tarsi black; palpi beneath, and legs white; anal tuft in male black at the base.

Expanse 1 inch.

Genus CYDALIMA.

Cydalima, Lederer, Pyral. Wien. Ent. Monat. viii. p. 397 (1863).

Wings smooth, silky, diaphanous, opalescent. Male: forewing longer, narrower, the costa less arched, and the exterior margin more oblique than in Margaronia:

hindwing with the exterior margin more convex hindward. Venation similar. Body longer, anal tuft of lax silky hairs; labial palpi porrect, broad, rounded in front, smoothly clothed with broad coarse scales, third joint minute; maxillary palpi short, broad and squamous at the tip; antennæ thick at the base, setaceous, slightly contorted and flattened at about one-third the length, with a few fine very minute lashes; legs moderately stout, smooth, middle tibiæ slightly thickened and laxly squamous; spurs slender, unequal.

Type, C. conchylalis.

CYDALIMA CONCHYLALIS.

Margarodes conchylalis, Guénee, Delt. et Pyral. p. 303, pl. 8, fig. 9 (1854).
Margaronia conchylalis, Walker, Catal. Lep. Het. B. M. xviii. p. 529 (1859).
Cydalima conchylalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 397 (1863).

Wings hyaline-white, opalescent, with a slender brown marginal line, which is composed of lunular spots in the forewing. Costa of forewing with a metallic cupreous-brown band, but which does not extend beyond the subcostal vein, and has a slight white dentation at end of the cell. Body silky white; collar on thorax, head, palpi above, fore femora and tibiæ above cupreous-brown; middle tibiæ and tips of tarsi paler brown; base of palpi, body beneath, and legs white.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{4}{10}$ inch.

CYDALIMA LATICOSTALIS (PLATE 182, FIG. 4).

Margarodes laticostalis, Guénee, Delt. et Pyral. p. 303 (1854), ♀.
Margaronia laticostalis, Walker, Catal. Lep. Het. B. M. xviii. p. 528 (1859).
Cydalima laticostalis, Lederer, Pyral, Wien. Ent. Monat. vii. p. 397 (1863).
Margaronia Leodicealis, Walker, Catal. Lep. Het. B. M. xviii. p. 530 (1859), ♂.

Wings hyaline-white, opalescent, with a slender brown marginal line, which is composed of lunular spots in the forewing. Costa of forewing with an irridescent cupreous-brown band of equal width to the apex, extending half across the cell, and indented by a white streak at end of the cell. Body silky-white; abdomen with a tendency to show blackish segmental bands; collar, head, palpi above, forelegs except the tarsi, and middle tibiæ iridescent cupreous-brown; base of palpi, body beneath, and legs white.

Expanse, ♂ $1\frac{4}{10}$, ♀ $1\frac{7}{10}$ inch.

Genus PACHYARCHES.

Parotis,* Hübner, Samml. Exot. Schmett. iii. p. 30, fig. 523-4 (1825).
Pachyarches, Lederer, Pyral. Wien. Ent. Monat. vii. p. 398 (1863); Meyrick, Trans. Ent. Soc. Lond. 1884, p. 295.

Male. Forewing elongate, costa arched towards the end, with a fold of long

* *Parotia* used in 1816 for a genus of Birds.

scales beneath, extending from base to beyond middle, which covers a pencil of fine hairs ; cell half the length ; first subcostal emitted at one-half before end of the cell, second and third close to the end, third bifid, fifth from the end ; discocellular very obliquely concave, radials from the ends ; middle median from angle close to end, lower at one-fifth ; submedian bent upward near the base, with a lower recurved slender branch extending to one-third its length : hindwing longer than broad, triangular, exterior margin slightly convex ; cell nearly two-fifths the length ; subcostals from the end, upper partly joined to costal ; discocellular outwardly oblique, slightly concave, radial from lower end ; two upper medians from end, lower at one-fourth ; a submedian and two internal veins. Body moderately stout ; abdomen long, tufted at the apex ; frontal tuft ridged at the sides ; labial palpi long, porrect, rostriform, pointed in front, third joint concealed ; maxillary palpi dilated with dense scales at the tip, truncate ; antennæ stout and flattened at the base, filiform, base of shaft excavated on inner side facing an erect projection of scales from basal joint ; antennæ in female simple ; legs finely squamous, inner spurs long, slender, outer short.

Type, P. psittacalis.

PACHYARCHES PSITTACALIS.

Parotis psittacalis, Hübner, Samml. Exot. Schmett. iii. p. 30, No. 262, figs. 523-4 (1825).

Margarodes psittacalis, Guénee, Delt. et Pyral. p. 308 (1854).

Margaronia psittacalis, Walker, Catal. Lep. Het. B. M. xviii. p. 529.

Pachyarches psittacalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 398 ; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 296.

Margaronia maliferalis, Walker, Catal. Lep. Het. B. M. xxxiv. 1363 (1865), ♂.

Apple-green. Both wings with a slight black dentate spot at end of the cell, but which are obsolete in the female ; ciliæ cinereous-ochreous : forewing brownish-ochreous along edge of the costa. Palpi above brighter brownish-ochreous, white beneath ; anal tuft in male dark brown ; legs white above, greenish beneath ; fore femora and tibiæ with ochreous band ; middle femora with ochreous knee and tibiæ with basal streak ; basal tuft of antennæ in male tipt with ochreous.

Expanse, ♂ ♀, 1$\frac{2}{10}$ to 1$\frac{3}{10}$ inch.

PACHYARCHES POMONALIS (Plate 182, Fig. 7, ♂).

Margarodes pomonalis, Guénee, Delt. et Pyral. p. 309 (1854).

Margaronia pomonalis, Walker, Catal. Lep. Het. B. M. xviii. p. 530.

Pachyarches pomonalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 398.

Pale apple-green, tinged with yellow ; costal edge of forewing white. Cilia of both wings white, with a slender yellowish inner line. Palpi green above, white at the base ; legs entirely white ; anal tuft in male black.

Expanse, ♂ ♀, 1$\frac{1}{10}$ to 1$\frac{2}{10}$ inch.

PACHYARCHES HILARALIS.

Margaronia hilaralis, Walker, Catal. Lep. Het. B. M. xviii. p. 532.

Bright glaucous-green. Forewing with a white-bordered ochreous costal band, a slight ochreous spot in middle of the cell and another at its end, both disposed near the subcostal; some apple-green streaks between the veins, and a white spot near middle of the posterior margin; a slender brown marginal line with black points: hindwing with some apple-green streaks, and a spot at end of cell, a slender brown marginal line with black points. Cilia cinereous-white, with brown inner line. Abdomen with a dorsal row of short ochreous bands; anal tuft in male blackish, tipt with cinereous brown; tip of abdomen in female ochreous; palpi, sides of thorax, and bands on fore and middle tibiæ ochreous; base of palpi white; legs greenish.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{3}{10}$ inch.

Genus ENCHOCNEMIDIA.

Enchocnemidia, Lederer, Pyral. Wien. Ent. Monat. vii. p. 399 (1863).

Male. Differs from typical Pachyarches in the forewing, in the absence of the plumose costal fold on the underside, and in the hindwing having the submedian and internal vein clothed with long silky tufts of hairs. The hind tibiæ also differ in being clothed with long laterally-spreading hairs.

Type, E. squamopedalis.

ENCHOCNEMIDIA PHRYNEUSALIS (Plate 182, Fig. 12, ♂).

Margaronia Phryneusalis, Walker, Catal. Lep. Het. B. M. xviii. p. 531 (1859), ♀.
Margaronia Morvusalis, Walker, Catal. Lep. Het. B. M. xviii. p. 533 (1859), ♀.
Margaronia Atlitalis, Walker, *id.* p. 533 (1859), ♀.

Apple-green. Both wings with an indistinct blackish spot at end of the cell, and a marginal row of very minute black points. Costa of forewing slenderly edged with ochreous. Cilia brownish-cinereous. Palpi green above, white beneath; fore tibiæ with ochreous bands; all the tarsi white above; anal tuft in male blackish.

Expanse $1\frac{4}{10}$ to $1\frac{5}{10}$ inch.

Genus PYGOSPILA.

Pygospila, Guénée, Delt. et Pyral. p. 312 (1854) ♀; Walker, Catal. Lep. Het. B. M. xviii. p. 537; Lederer, Pyral. Wien Ent. Monat. vii. p. 404.
Lomotropa, Lederer, Pyral. Wien. Ent. Monat. vii. p. 404 (1863), ♂.
Phlyctænia (part), Hübner, Verz. bek. Schmett. p. 359.

Forewing long, lanceolate; costa of male with a slightly swollen and depressed

fold above end of the cell and covered with scabrous scales beneath; costal and subcostals curved below the fold; cell more than half the length; first subcostal at nearly half before end of the cell, second and third from angle close to end, third bifid, fifth from end; discocellular outwardly concave, radials from upper and lower end; two upper medians from end of cell, lower at one-fifth; submedian recurved, bent near the base, and with a slender lower branch rejoining it at nearly half its length: hindwing short, triangular; cell about one-third the length; subcostals on a footstalk beyond the cell, upper partly joined to costal; discocellular outwardly oblique, concave, radial from lower end; two upper medians from end, lower at one-fifth; a submedian and two internal veins. Body moderately stout, abdomen long, attenuated; tegulæ clothed with long lax scales; labial palpi ascending, broad, compressed, smoothly squamous, third joint minute, conical; antennæ setaceous; legs moderately long, smooth; hind tibiæ with a tuft of hairs at the tip, inner spurs long, slender, outer spurs short. Female. Costal fold on forewing absent. No tuft at tip of hind tibiæ.

PYGOSPILA TYRES.

Phalæna Pyralis Tyres, Cramer, Pap. Exot. iii. p. 124, pl. 263, fig. e. (1782), ♀.
Phlyctænia Thyralis, Hübner, Verz. bek. Schmett. p. 359 (1825-7).
Pygospila Tyresialis, Guénee, Delt. et Pyral. p. 312 (1854); Walker, Catal. Lep. Het. B. M. xviii. p. 537; Lederer, Pyral. Wien. Ent. Monat. vii. p. 401.
Phalæna æstuata (part), Fabricius,* Syst. Ent p. 638; Ent. Syst. iii. 2, p. 207, ♀ (*nec* Linnæus).
Pygospila costiflexalis, Guénee, Delt. et. Pyral. p. 313 (1854), ♂.
Lomotropa costiflexalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 405, pl. 14, fig. 8 (1863), ♂.

Purplish-black, glossy. Male: forewing with a costal fold above end of the cell; two yellowish-ochreous transverse basal outwardly-oblique recurved lines, followed by two small spots below the submedian vein, above which are four equidistant transverse series of bluish-white spots: hindwing with bluish-white streaks from the base, some discal streaks, a spot at end of the cell, and three small spots on middle of the exterior margin. Female. Forewing with the costal edge not folded; markings more prominent, the basal lines sometimes white: hindwing with the markings also more prominent, and with an upper discal spot. Thorax with six longitudinal lines, which are ochreous-yellow in male, and sometimes white in female; abdomen with two dorsal rows and a lateral row of white spots; front of head and basal joint of antennæ with white band; base of palpi, body beneath, and legs white; fore tibiæ with black bands, middle and hind tibiæ with a black longitudinal streak: hind tibiæ of male with a tuft of hair.

Expanse $1\frac{1}{2}$ to $1\frac{3}{4}$ inch.

* In the Banksian Cabinet at the British Museum is a female of this insect labelled *Phal. Æstuata* by Fabricius.

Genus NEURINA.

Euglyphis,* Hübner, Verz. bek. Schmett. p. 341 (1825-7); Walker, Catal. Lep. Het. B. M. xviii. p. 538.
Neurina, Guénee, Delt. et Pyral. p. 313 (1854); Lederer, Pyral. Wien. Ent. Monat. vii. p. 395 (1863).

Forewing elongated, triangular; costa arched towards the end, exterior margin oblique, very slightly convex, posterior margin rounded towards the base; cell about half the length; first subcostal at one-third before end of the cell, second and third close to end, third bifid, fifth from the end and running close along third to half its length; discocellular oblique, slightly concave, radials from the ends; middle median close to end, lower at one-fourth; submedian bent upward near the base, with a short lower recurved branch which rejoins it at one-third its length: hindwing short, broad, triangular, exterior margin and anal angle very convex; cell about one-third the length, broad; subcostals on a short footstalk beyond the cell; discocellular outwardly-concave, radial from lower end; middle median close to end, lower at one-fourth; a submedian and two internal veins. Body moderately stout; anal tuft prominent; tegulæ clothed with long silky hairs; labial palpi ascending above vertex, compressed, pubescent, third joint minute, obtuse; maxillary palpi lanceolate, moderately long; proboscis very thick at the base; antennæ long, slender, very minutely serrate-ciliate; legs slender, tarsi very long, fore tibiæ and basal tarsi pilose at the sides in the male; spurs moderate, slender, unequal.

NEURINA PROCOPIA (Plate 182, Fig. 1).

Phalæna Noctua Procopia, Cramer, Pap. Exot. iv. p. 152, pl. 368, fig. E. (1782).
Euglyphis Procopia, Hübner, Verz. bek. Schmett. p. 341; Walker, Catal. Lep. Het. B. M. xviii. p. 538.
Neurina Procopialis, Guénee, Delt. et Pyral. p. 314; Lederer, Pyral. Wien. Ent. Monat. vii. p. 395.

Wings white. Both wings with the base partly reddish-ochreous; the outer two-thirds streaked with glossy purplish cinereous-brown along the veins, leaving very slender intervening white lines; forewing with a black spot at base of the costa, and a subbasal spot below the cell. Thorax, head, palpi, pectus, and middle tibiæ reddish-ochreous; abdomen white with dorsal and lateral black bands; thorax and abdomen beneath white; forelegs, middle and hind femora, band on middle of hind tibiæ, and their tarsi, cinereous-brown.

Expanse $1\frac{3}{10}$ to $1\frac{5}{10}$ inch.

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* Previously used by Hübner (Verz. p. 190).

Genus FILODES.

Filodes, Guénee, Delt. et. Pyral. p. 317 (1854) ; Lederer, Pyral. Wien. Ent. Monat. vii. p. 390.
Pinacia (part), Hübner ; Geyer.
Auxomitia, Lederer, Pyral. Wien. Ent. Monat. vii. p. 391 (1863).

Differs from Neurina in the forewing being more triangular, the exterior margin very oblique and not convex : hindwing longer, narrower, less convex on exterior margin. Venation similar. Body not stout ; abdomen slender, longer, with lateral tufts and short anal tuft ; palpi shorter ; antennæ much longer, which extend one-third beyond the forewing ; fore tibiæ in the male thickly pilose, fore tarsi pilose at the sides, the hairs on the outer side of basal joint very long ; middle and hind tarsi also slightly pubescent.

FILODES FULVIDORSALIS (Plate 182, Fig. 2, ♂, 2*a* larva).

Pinacia fulvidorsalis, Hübner, Geyer. Zutrage Samml. Exot. Schmett. 15, 322, fig. 643-4 (1832).
Filodes fulvidorsalis, Guénee, Delt. et Pyral. p. 317 ; Lederer, Pyral. Wien. Ent. Monat. vii. p. 390, pl. 12, fig. 17.
Englyphis filvidorsalis, Walker, Catal. Lep. Het. B. M. xviii. p. 539.

Wings purplish fuliginous-grey : forewing reddish-ochreous at the base ; with a chalybeous-black spot at the base and speckles along the costal border, three pure black spots in the cell, and another below the cell. Thorax, head, and abdomen above, reddish-ochreous ; front of head and palpi chalybeous-black ; pectus yellow ; legs cupreous-brown ; body beneath, and short lateral tufts and anal tuft chalybeous-black ; dorsal spots chalybeous-grey.

Expanse $1\frac{3}{10}$ inch.

Larva short ; olive-green ; head yellowish ; with several black warty spots, and white subdorsal streaks ; front legs black.

Pupa red ; with a prolonged slender lingual and pedal sheath.

"Feeds on Thunbergia alata" (*Thwaites.*)

FILODES MIRIFICALIS.

Auxomitia mirificalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 391, pl. 13, fig. 1 (1863).

Closely allied to F. fulvidorsalis. Differs only in being slightly greyer in colour : forewing with the ochreous base obsolescent or quite absent ; basal black spot similar ; and with faint traces of a transverse oblique discal blackish fascia : hindwing also with faint traces of a similar fascia, and a spot at end of the cell. Body paler ochreous, with silvery-grey bands and tufts.

Expanse $1\frac{4}{10}$ to $1\frac{5}{10}$ inch.

Genus DODANGA.

Male. Forewing short, broad, triangular ; cell half the length ; first subcostal

at one-fourth before end of the cell, second close to the end, trifid, fifth from the end; discocellular slightly concave, bent near each end, radials from the angles; middle median close to the end, lower at one-fourth; submedian bent upward near the base: hindwing rather long, apex produced and convex, exterior margin very oblique and concave in the middle; anal angle convex and lobate; abdominal margin long, corrugated, fringed, and with a basal divergent tuft of much longer fine silky hairs; cell one-third the length, narrow; subcostals from end of cell, upper partly joined to the costal; discocellular obliquely concave, radial from lower end; two upper medians from extended end of cell, lower at one-third; a straight submedian and internal vein. Body slender; abdomen extending half beyond the hindwings, flattened laterally, with short smooth lateral subterminal tufts and smooth thick conical anal tuft; labial palpi ascending, laxly squamous in front, tip short, obtusely pointed; maxillary palpi erect, slender, reaching to end of labial; antennæ slender, submoniliform; legs long, slender, smooth, spurs unequal.

DODANGA LOBIPENNIS (Plate 182, Fig. 3).

Male. Dark fuliginous-brown, with a dull cuprescent gloss: forewing with a slight black postmedial recurved line, the bordering inner costal area being clouded with darker brown; a slight black spot in middle of the cell and a streak at the end: hindwing with traces of a slight black discal line; cilia long, abdominal margin with a basal tuft of long black silky hairs. Body smooth, with a dull cuprescent gloss; frontal tuft whitish at the sides; base of palpi white; legs pale brown.

Expanse $\frac{7}{8}$ inch.

Genus CONOGETHES.

Conogethes, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 314, ♀.

Male. Forewing elongated, triangular; cell fully half the length; first subcostal emitted at two-fifths before end of the cell, second and third close to end, third bifid, fifth from end; discocellular deeply concave in middle, bent near each end, radials from the angles; middle median from angle close to end of cell, lower at one-fifth; submedian somewhat waved, with a short slender lower branch: hindwing short, triangular, exterior margin convex; cell one-third the length; two subcostals from end, upper partly joined to the costal near the base; discocellular very concave, radial from lower end; two upper medians from end of cell, lower at one-fourth; a submedian and two internal veins. Body moderately slender, anal tuft pointed; labial palpi curved upward, lanceolate, squamous in front, pointed at the tip; maxillary palpi short, slender; antennæ rather stout, simple; legs rather stout, smooth, spurs unequal.

CONOGETHES PUNCTIFERALIS.

Astura punctiferalis, Guénee, Delt. et Pyral. p. 320 (1854); Walker, Catal. Lep. Het. B. M. xviii. p. 548.

Botys punctiferalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 375.

Conogethes punctiferalis, Meyrick, Trans. Ent. Soc. Lond. 1884, p. 311.

Astura Erscalis, Walker, Catal. Lep. Het. B. M. xix. p. 980 (1859).

Botys Nicippealis. Walker, *id.* p. 999 (1859).

Astura guttatalis, Walker, *id.* xxxiv. p. 1381 (1865).

Male and female. Yellowish-ochreous: forewing with transverse purplish-black basal and subbasal spots, an antemedial row of spots, a postmedial and a discal zigzag series of spots, and three medial submarginal spots; a spot also near end of cell and a lunule at the end: hindwing with a purplish-black spot at end of the cell, a discal, and a submarginal zigzag series of spots. Thorax black spotted; abdomen with three dorsal rows of black spots, anal tuft in male black streaked; palpi with a brown or blackish band; forelegs and tarsi with blackish bands.

Expanse, ♂ ♀ $\frac{7}{8}$ to 1 inch.

Genus DADESSA.

Allied to *Conogethes* (Meyrick, Trans. Ent. Soc. Lond. 1884, p. 314). Wings comparatively longer; pattern of markings similar to the type (*C. punctiferalis*, Guén.).

Male. Veins of forewing similar: hindwing with the cell longer and much broader; middle and lower median vein distorted, being slightly bent upward near the base, and having a short glandular tuft of scales at their base on the upper side; the submedian and internal veins extend nearer to the median, are curved upward opposite to the bent portion of the medians, and also have similar glandular tufts of short hairs.

DADESSA EVAXALIS (Plate 183, Fig. 3, ♂).

Botys Evaxalis, Walker, Catal. Lep. Het. B. M. xix. p. 995 (1859), ♂ ♀.

Yellowish-ochreous: forewing with transverse purplish-black basal and subbasal spots, an antemedial macular line, a postmedial and discal zigzag series of almost continuous dentate spots, beyond which are three medial submarginal slender spots; a spot near end of the cell, and a streak at the end: hindwing with a purplish-black spot at end of the cell, a discal zigzag series of spots, and a submarginal series of slender spots, these markings being less defined in the female. Male with a tuft of short ochreous hairy scales between the base of middle and lower medians, and similar tufts on submedian and internal veins, the adjoining black lower discal spots being also covered with irridescent cupreous lax scales. Thorax and basal segments of abdomen in male black spotted, anal tuft partly

black; spots indistinct in the female; palpi ochreous at the tip, second joint with a broad black band, base whitish; legs paler above; forelegs in male with blackish bands; hind tarsi in male with a tuft of irridescent blackish hairs. Cilia edged with white.

Expanse, ♂ 1, ♀ $1\frac{2}{10}$ inch.

Genus PITACANDA.

Male. Wings smooth: forewing long; costa arched toward end, exterior margin very oblique; cell extending more than half the length; first subcostal emitted at one-sixth before end of the cell, second and third close to end, third bifid, fifth from end and extending upward close to and parallel with third to one-third its length; discocellular slender, concave, radials from the ends; middle median close to end of cell, lower at one-fifth; submedian curved upward, with a slender lower branch extending to near posterior-angle: hindwing short, triangular, apex convex; cell one-third the length; two subcostals from the end, upper partly joined to costal; discocellular almost bent in the middle, radial from lower end; two upper medians from end of cell, lower close to end; a straight submedian and internal vein. Body rather stout, abdomen extending nearly half beyond hindwings; thorax pilose; palpi short, porrect, convergent at the tip, apex slightly decumbent, smoothly squamous; antennæ rather thick, stoutly pectinated on the outer side and serrated on the inner side to near the tip, the branches minutely ciliated; legs rather stout, fore and middle tibiæ pilose; fore tarsi also slightly pilose; hind tibiæ broad, flattened, excavated exteriorly in the middle, slightly pilose, spurs short, basal joint of tarsi also slightly pilose.

PITACANDA SPILOSOMOIDES (Plate 183, Fig. 10).

Male. Wings ochreous-white: forewing with a black basal costal spot, four short longitudinal subbasal streaks, a transverse curved antemedial band, and a recurved postmedial band composed of short streaks between the veins, followed by a small spot below the lower subcostal, and two discal spots situated above and below the upper median; the outer border streaked with yellow between the veins: hindwing with the outer border yellow, a large black spot on middle of abdominal margin. Thorax, head, palpi, and base of abdomen ochreous-white; tegulæ and abdomen ochreous; sides of thorax with black spots; abdomen with black dorsal bands; legs whitish; fore femora and tibiæ, and middle femora banded with black.

Expanse $1\frac{3}{8}$ inch.

Genus BOTYODES.

Botyodes, Guénee, Delt. et Pyral. p. 320 (1854); Walker, Catal. Lep. Het. B. M. xviii. p. 550; Lederer, Pyral. Wien. Ent. Monat. vii. p. 394.

Wings large: forewing elongate, triangular; cell fully half the length; first

subcostal emitted at half before end of the cell; second from angle close to end, trifid, fifth from the end, curved upward from the base; discocellular slender, concave, radials from close to ends; middle median from angle close to end of cell, lower at fully one-fourth; submedian bent near the base, with a lower recurved slender branch: hindwing short, broad, exterior margin convex; cell one-third the length, very broad; two subcostals from beyond end of cell, upper partly joined to costal; discocellular concave, radial from lower end; two upper medians from end of cell, lower at one-fifth; a straight submedian and two internal veins. Body rather stout; anal tuft in male lax; labial palpi oblique, compressed, broad, truncate, clothed with short compact scales, third joint short, thick, obtuse; maxillary palpi very short; antennæ slender, setaceous, base inflated and with a short fascicle of hairs in front; pectoral shield broad; legs rather stout, fore and middle femora, and the tibiæ, clothed with short fine hairy scales; hind pair of spurs short.

Type, B. Asialis.

BOTYODES ASIALIS (PLATE 183, FIG. 1, ♂, 1*a* larva).

Botyodes Asialis, Guénee, Delt. et Pyral. p. 321 (1854), ♀; Walker, Catal. Lep. Het. B. M. xviii. p. 551; Lederer, Pyral. Wien. Ent. Monat. vii. p. 394, pl. 13, fig. 8, ♂; Snellen, Tijd. voor. Ent. 1883, p. 139.

Botys sellalis, Walker, Catal. Lep. Het. B. M. xviii. p. 648 (*nec* Guénee).

Deep yellow. Both wings with a purplish ochreous-red undulated bordered broad marginal band, which does not completely extend to the apex on the forewing; an irregular discal line, and an oval pale-centred mark at end of each cell: forewing also with a punctiform orbicular spot, an outwardly-oblique antemedial interrupted line, and some basal spots; anal tuft in male greyish-black; pectoral shield pure white; body and legs yellow.

Expanse $1\frac{3}{4}$ to 2 inches.

Larva rather short, thick; olive-green; with a reddish lateral band, minute dorsal and sublateral black warty-spots and two lateral rows of larger spots; a slender black hair rising from the former; head black, vertex yellow. Pupa green; with a short anal point and pedal sheath.

"Feeds on Ficus, &c." (*Thwaites*).

Genus CADARENA.

Forewing elongate, triangular, apex pointed, somewhat subfalcate; cell more than half the length; first subcostal emitted at nearly half before end of the cell, second and third from angle close to end, third bifid, fifth curved upward from end; discocellular concave in middle, bent near the ends, radials from the angles; middle

median from angle close to end of cell, lower at one-third; submedian recurved, with a slender lower branch rejoining it at one-third its length: hindwing broad, apex obtusely pointed, exterior margin convex; cell one-third the length, broad; subcostals from the end; discocellular concave, radial from lower end; middle median close to end of cell, lower at one-fourth; a submedian and two internal veins. Body rather slender; palpi porrect, rather broad, pointed in front, third joint concealed, clothed with coarse scales; maxillary palpi oblique, slender; antennæ long, thickish, filiform; legs long, slender, smooth, inner spurs very long, outer short.

CADARENA SINUATA (Plate 183, Fig. 2, ♂, 2*a* larva).

Phalæna sinuata, Fabricius, Spéc. Ins. ii. p. 267 (1781); Ent. Syst. iii. 208 (1793).

Phalæna Geom. marginata, Cramer, Pap. Exot. iv. p. 243, pl. 400, fig. 1 (1782).

Botys marginalis, Swainson, Zool. Illust. 1st ser. ii. pl. 77, fig. 1 (1821); Guénee, Delt. et Pyral. p. 343; Walker, Catal. Lep. Het. B. M. xviii. p. 633.

Lemon-yellow: forewing with a broad carmine-red dentate-bordered costal and apical band, and a short streak at the posterior angle: hindwing with a carmine-red apical and dentate subanal marginal broken band. Cilia at the apex carmine. Front of thorax, head, and palpi above carmine-red; a longitudinal dorsal carmine streak extending from the collar to apex of abdomen; palpi beneath, and legs, whitish; fore and middle tibiæ black above.

Expanse $1\frac{3}{10}$ to $1\frac{5}{10}$ inch.

"Colombo" (*Mackwood*).

Larva thick, attenuated anteriorly; green, with a lateral row of white-tipt black dots bordering a slender dark line. Pupa pale green, yellowish beneath; with a short anal point and pedal sheath.

"Feeds on Moduca" (*Thwaites*).

Genus HAPALIA.

Hapalia, Hübner, Verz. bek. Schmett. p. 355 (1825-7); Stephens, Illust. Brit. Ent. Haust. iv. p. 417 (1835).

Botys (*Hapalia*), Stephens, Catal. Brit. Lep. in Brit. Mus. p. 241 (1850).

Male. Forewing elongate, rather triangular; cell more than half the length; first subcostal at two-fifths before end of the cell, second and third from angle close to the end, third bifid, fifth from the end; discocellular bent near the ends, concave in middle, radials from the angles; middle median from angle close to end of cell, lower at one-third; submedian straight: hindwing short, broad, exterior margin convex; cell one-third the length, broad; subcostals from the end; discocellular outwardly-oblique, radial from lower end; middle median from angle close to end of cell, lower at one-third; a straight submedian and two internal veins. Body slender,

abdomen keeled above; labial palpi obliquely porrect, projecting half beyond the head, coarsely squamous, pointed in front, third joint short; maxillary palpi short; legs long, slender, spurs moderately long, unequal; antennæ finely ciliated.

Type, H. flavalis.

HAPALIA DENTICULOSA (Plate 183, Fig. 8).

Yellowish-ochreous: forewing with some indistinct ochreous-brown basal spots, an outwardly-oblique undulated antemedial line, an irregular discal denticulated line which is quadrately angulated in the middle, followed by a submarginal denticulated fascia, and marginal points; the marginal border being more or less suffused with ochreous-brown; a punctiform orbicular spot, and a pale-centred reniform mark: hindwing with a pale-centred ochreous-brown spot at end of the cell, an irregular angulated denticulated discal line, submarginal fascia, and marginal points; the marginal border being more or less suffused with ochreous-brown. Cilia cinereous-brown. Sides of thorax, head, palpi above, band on fore femora and tibiæ ochreous-brown; palpi beneath and legs white.

Expanse 1 inch.

Near to *H. Diniasalis*, and to *H. signitalis*, Walker.

HAPALIA JOPASALIS (Plate 182, Fig. 14, ♂).

Botys Jopasalis, Walker, Catal. Lep. Het. B. M. xviii. p. 652 (1859), ♂.
Botys Boteralis, Walker, Catal. Lep. Het. B. M. xviii. p. 716 (1859); xix. p. 994.

Ænescent-yellow. Male: forewing crossed by a short basal, and an outwardly-oblique curved antemedial purple-brown line, an irregular discal denticulated line, which is bent inward to below end of the cell, and a marginal row of points, the latter being obsolescent hindward; a punctiform orbicular spot, and a large oval reniform mark; a slight purple-brown patch at the apex: hindwing with a similar inner line, a denticulated discal line, marginal points, and apical patch. A purple-brown band on tip of palpi, on penultimate segment of abdomen, on fore tibiæ, and a spot on tip of femora, two spots on fore trochanter, and one on each femora beneath.

Female: with the markings more distinct, but the discal line less acutely denticulated, the apical patches darker: forewing also with an additional oval sub-basal patch; spots on legs beneath obsolete.

Expanse ♂ 1 inch, ♀ $\frac{9}{10}$ inch.

HAPALIA (?) PLAGIATALIS.

Botys plagiatalis, Walker, Catal. Lep. Het. B. M. xviii. p. 673 (1859).

"Female. Pale luteous-yellow, shining: forewings slightly rounded at the tips,

very oblique along the exterior border; with four brown patches, one near the base the second by the interior angle, the third opposite the second and near the costa, the fourth subapical, elongate, larger than the others, accompanied along its inner side by the darker submarginal line, which is obsolete hindward; marginal points brown: hindwings semihyaline, with a brown subapical patch.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA FRATERNA (PLATE 183, FIG. 9).

Pale ochreous-yellow; wings opalescent: forewing with an indistinct ochreous-brown spot at base of the posterior margin, a recurved antemedial line, an irregular discal denticulated line, and a marginal band which is narrowest in its middle; the discal line quadrately bent outward in its middle and almost macular from the median vein upward; a large orbicular spot and quadrate reniform mark: hindwing with an ochreous-brown quadrate spot at end of the cell, an irregular discal denticulated line which is quadrately angulated in its middle; and a marginal macular band which is attenuated to anal end. Cilia whitish-cinereous. Front of thorax, head, palpi above, and band on fore tibiæ darker ochreous-yellow; palpi beneath and legs white.

Expanse $1\frac{2}{10}$ inch.

Allied to *H. Mysisalis.*

HAPALIA MARGINALIS (PLATE 182, FIG. 13).

Straw-yellow. Forewing crossed by a black outwardly-oblique waved antemedial line, a medial and an irregular postmedial denticulated line, followed by a marginal row of black points; the costal and exterior border suffused with purplish cinereous-brown; a black dot near base of posterior margin, a punctiform orbicular, and a prominent reniform spot: hindwing with a black spot at end of cell, two interrupted discal denticulated lines, and a marginal row of black points; apex suffused with purplish cinereous-brown. Abdomen above with two black spots on third basal segment; fore tibiæ with a black band.

Expanse $\frac{8}{10}$ inch.

HAPALIA DEDUCTALIS.

Botys deductalis, Walker, Catal. Lep. Het. B. M. xviii. p. 659 (1859).

Cinereous. Wings slightly iridescent; crossed by an obsolescent cinereous-brown discal slightly undulated line: forewing with an obsolescent orbicular and

reniform mark. Head, palpi above, and band on fore tibiæ ochreous, palpi beneath and legs white.

Expanse ♂ $1\frac{1}{8}$ inch.

HAPALIA ADMENSALIS.

Botys admensalis, Walker, Catal. Lep. Het. B. M. xviii. p. 652 (1859).

Brownish-ochreous: forewing with a transverse very indistinct blackish curved antemedial line, and an irregular discal denticulated line; a spot at lower base of the wing, and a black punctiform orbicular and reniform spot: hindwing with a black spot at end of the cell, and a less distinct discal irregular line. Cilia whitish. Abdomen with a black dot on each side near the base; palpi brown above, white beneath; legs white, fore tibiæ with a brown band.

Expanse $1\frac{1}{8}$ inch.

HAPALIA ABLACTALIS.

Botys ablactalis, Walker, Catal. Lep. Het. B. M. xviii. p. 660 (1859).

Yellowish-cinereous. Wings semihyaline, opalescent; marginal line black; cilia white: forewing with a transverse indistinct outwardly-oblique antemedial cinereous line, an irregular discal line, and a lunule at end of the cell: hindwing with a similar irregular discal line, and lunule at end of the cell. Abdominal segments slenderly edged with white; palpi beneath and legs white.

Expanse $\frac{9}{10}$ to 1 inch.

HAPALIA ULTIMALIS.

Botys ultimalis, Walker, Catal. Lep. Het. B. M. xviii. p. 659 (1859).

Olivescent-cinereous: forewing crossed by a darker cinereous curved antemedial line, and an irregular postmedial line, the latter curved inward to below end of the cell; orbicular and reniform marks forming two obsolescent ringlets: hindwing with a similar irregular discal line. Palpi brownish above, white beneath; legs white.

Expanse ♀ $1\frac{2}{10}$ inch.

HAPALIA CONCOLOR (Plate 181, Fig. 3).

Female. Both wings uniformly cinereous-white, opalescent. Body whitish above; sides of the thorax, head, and palpi above pale ochreous; base of palpi, legs, and body beneath white.

Expanse $1\frac{3}{10}$ inch.

HAPALIA (?) INTERRUPTALIS.

Botys interruptalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1406 (1865).

"Pale ochraceous, stout. Wings whitish, iridescent, pale ochraceous at the base; with four zigzag oblique ochraceous here and there brownish-marked lines;

first line approximate to the second and abbreviated in the disc of the hindwing; third and fourth near the exterior border; marginal line ochraceous. Forewings acute; orbicular and reniform marks pale-ochraceous, mostly brown-bordered; exterior border slightly convex, very oblique: abdomen extending much beyond the hindwings; legs smooth, stout.

"Expanse 16 lines."

HAPALIA (?) DIALIS.

Botys Dialis, Walker, Catal. Lep. Het. B. M. xviii. p. 675 (1859).

"Pale luteous. Wings with brownish denticulated lines; exterior line much bent in the middle; submarginal line diffuse, indistinct; marginal festoon brownish: forewings slightly acute; exterior border rather oblique; reniform mark brown, narrow.

"Expanse 8 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA (?) THAISALIS.

Botys Thaisalis, Walker, Catal. Lep. Het. B. M. xviii. p. 674 (1859).

"Pale yellowish. Wings with slight incomplete somewhat dotted brownish undulating lines; exterior border with a brown band, which is undulating on the inner side; a discal brownish ringlet, which is largest in the forewings, where it represents the reniform mark.

"Expanse 9 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA (?) MYRINALIS.

Botys Myrinalis, Walker, Catal. Lep. Het. B. M. xviii. p. 673 (1859).

"Female. Pale yellow: hindwings and abdomen more whitish: forewings acute; interior, exterior, and submarginal lines pale brown, slightly undulating, not distinct; a slight brownish tinge between the submarginal line and the border; orbicular and reniform marks pale brown, the former punctiform, the latter forming an irregular ringlet: hindwings with the lines paler and more indistinct than in the forewings, and partly obsolete.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA(?) BREVILINEALIS.

Botys brevilinealis, Walker, Catal. Lep. Het. B. M. xviii. p. 674 (1859).

"Male. Testaceous. Wings with slightly undulating brown exterior and submarginal lines; exterior line darker in front. Forewings with a distinct interior brown line, and with a dark brown dot towards the costa between the interior and exterior lines; marginal points brown: hindwings with a darker brown interrupted marginal line.

"Expanse 9 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA (?) CYNARALIS.

Botys Cynaralis, Walker, Catal. Lep. Het. B. M. xviii. p. 672 (1859).

"Female. Pale yellow. Wings with black submarginal points, and with three irregular lines composed of brown streaks: hindwings with the lines more incomplete, and with a cupreous spot near the interior angle. Thorax with three brown spots in front, the middle one double; abdomen with a blackish dot on each side near the base.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA (?) ANNULALIS.

Botys annulalis, Walker, Catal. Lep. Het. B. M. xviii. p. 675 (1859).

"Pale testaceous. Wings with the interior and exterior lines brown, slender, undulating, festoon-like, with slight interruptions; space between the exterior line and the exterior border mostly brown; a brown subcostal ringlet, larger and more diffuse and more remote from the base in the forewings than in the hindwings: forewings with two or three brown points about the lines.

"Expanse 8 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA (?) NEPHEALIS.

Botys Nephealis, Walker, Catal. Lep. Het. B. M. xviii. p. 673 (1859).

"Male. Testaceous. Wings with a pearly lustre, somewhat ochraceous towards the exterior border, which is brown: forewings ochreous along the costa; lines brown, slightly undulating; submarginal line abbreviated hindward and con-

tiguous to a brown streak: hindwings with the exterior and submarginal lines brown, incomplete.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA (?) DRYOPEALIS.

Botys Dryopealis, Walker, Catal. Lep. Het. B. M. xviii. p. 672 (1859).

"Female. Luteous-yellow. Forewings acute; costa ferruginous; exterior border more broadly ferruginous; interior and exterior lines undulating, denticulated, ferruginous; orbicular and reniform marks ferruginous; the former small, the latter narrow, joining an exterior diffuse pale spot: hindwings pale yellow; exterior line and border pale brown, the former indistinct. Abdomen paler; sides of thorax ferruginous.

"Expanse 11 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HAPALIA (?) JANAPALIS.

Botys Janapalis, Walker, Catal. Lep. Het. B. M. xviii. p. 676 (1859).

"Female. Brown, moderately stout, with a slight cinereous tinge. Wings narrow, with a brown discal ringlet, and with an exterior oblique irregular pale-bordered brown line, composed of cuneate marks. Palpi short, stout, compressed, hardly rising as high as the vertex, third joint conical, not one-fourth the length of second; antennæ rather stout; abdomen long, extending half beyond hindwings; legs rather stout.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus CIRCOBOTYS.

Circobotys, Butler, Types, Lep. Het. Brit. Mus. Part 3, p. 77 (1879).

Forewing very long, narrow, and triangular; costa arched towards end, apex obtusely pointed, almost subfalcate; cell more than half the length; first subcostal at one-fifth before end of the cell, second and third from angles close to end, third bifid, fifth curved upward from the end; discocellular concave, radials from the ends; middle median close to end of cell, lower at nearly one-half; submedian curved near base, with a slender lower recurved branch: hindwing rather long, triangular; cell one-fourth the length at upper end, one-half at lower end; sub-

costals from beyond end of cell, upper partly joined to costal; discocellular very oblique, concave at upper end, radial from extended lower end; two upper medians from end, lower at one-third; a submedian and two internal veins. Body slender, abdomen extending half beyond hindwings; labial palpi porrect, very laxly squamous, rostriform; maxillary palpi oblique, stout, squamous; antennæ slender, setaceous; legs slender, middle tibiæ fringed, spurs long, unequal.

Type, C. nycterina.

CIRCOBOTYS OCTOGUTTALIS (PLATE 182, FIG. 11).

Botys octoguttalis, Felder et Rogenhoffer, Nov. Voy. Lep. iv. pl. 135, fig. 38 (1875), ♂.

Cinereous ochreous-brown: forewing partly ochreous along middle of the costal and exterior border; with four black-bordered pure white spots, the first being small, the second large and quadrate, representing the orbicular and reniform, the third oval and situated half-way between the cell and apex, the fourth below the reniform; these spots are all smaller in the female: hindwing with the exterior border broadly ochreous-yellow; an obsolescent inner brown line ending in an obsolescent yellowish spot at end of the cell; a marginal row of minute brown points. Body cinereous ochreous-brown; palpi above blackish; palpi beneath and legs white; forelegs with black bands.

Expanse ♂ ♀ $\frac{7}{10}$ inch.

Genus DEBA.

Deba, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1495 (1865).

Phycidicera, Snellen, Midd. Sumatra, Exp. iv. 1; Lep. p. 71 (1880); Tijd. voor Ent. 1880, p. 228; *id.* 1884, p. 37.

Male. Forewing elongate, triangular; cell half the length; first subcostal emitted at two-fifths before end of the cell, second and third approximate, third bifid, fifth from end of cell; discocellular concave, radials from close to the ends; middle median from angle close to end of cell, lower about one-third; submedian slightly curved upward from the base: hindwing short, triangular, exterior margin very oblique, slightly convex; cell very broad, one-third the length; subcostals from end; upper partly joined to the costal; discocellular concave, radial from lower end, two upper medians from end of cell, lower at one-third. Body stout; thorax with long lax tegulæ; labial palpi stout, erect, squamous, second joint rising to level of the eyes, third joint short, broad, slightly tufted; maxillary palpi very slender; antennæ stout, contorted, broadly and stoutly bipectinated from the base to about one-fourth the length, the branches being curved, finely serrated thence to the tip, basal joint thick, and with a short thick tuft at base of the shaft; legs smooth, slender, spurs long, slender.

DEBA SURRECTALIS.

Deba surrectalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1495 (1865), ♂.
Phycidicera salebrialis, Snellen, Midden Sumatra, Exp. iv. 1; Lep. p. 71 (1880); Tijd. voor Ent. 1880, p. 228; *id.* 1884, p. 37, pl. 3, fig. 6, ♂.

Male. Brownish-ochreous: forewing brighter coloured along the costa; with a transverse rather broad outwardly-curved antemedial, and an inwardly-oblique sinuous line; the latter line irregularly bent upward below end of the cell; a black basal spot, a punctiform spot in middle of the cell, and a lunular spot at the end: hindwing with two transverse undulating medial black lines. Branches of antennæ dusky brown; fore tibiæ with a brown band.

Expanse $1\frac{1}{10}$ inch.

Genus LOTANGA.

Allied to *Deba*. Form of wings and venation similar. Male: palpi rather longer, second joint keeled at the apex in front, third joint more pointed, not tufted; antennæ setaceous, slightly flattened and minutely serrated on the inner side for a short distance beyond the base; fore and middle tibiæ slightly pilose. Female: antennæ slender, setaceous, not serrated.

Type, L. milvinalis.

LOTANGA MILVINALIS (Plate 183, Fig. 11).

Deba milvinalis, Swinhoe, Ms.

Ochreous-brown: forewing with a blackish transverse narrow outwardly-curved antemedial band, and a discal broader band which is curved inward to below end of the cell and then descends to middle of the posterior margin; a small blackish spot in middle of the cell, and a streak at the end; cilia white at the posterior end: hindwing with a blackish irregular discal denticulated line, and an indistinct spot at end of the cell; cilia white. Legs pale brownish-ochreous; fore tibiæ with ochreous-brown bands.

Expanse ♂ ♀ $1\frac{2}{10}$ inch.

LOTANGA DECIUSALIS.

Botys deciusalis, Walker, Catal. Lep. Het. B. M. xviii. p. 696 (1859), ♀; xix. p. 994.

Purplish ochreous-brown. Wings slightly iridescent: forewing crossed by an obsolescent brownish antemedial line, and an irregular rather broad discal line: hindwing with a similar obsolescent discal line. Cilia edged with cinereous. Fore tibiæ with a brown-black terminal band.

Expanse $1\frac{1}{8}$ inch.

Genus CONDEGA.

Male. Wings comparatively shorter and broader than in *Lotanga*. Venation

similar. Palpi shorter, second joint not keeled in front at the apex; antennæ minutely pubescent, base of shaft curved, dilated, and with a subbasal conical point in front. Body stout, abdomen rather short, smooth, anal tuft short, obtuse, tegulæ with very long and lax divergent hairs; legs rather stout, spurs very slender, unequal.

CONDEGA OBSCURATA (Plate 183, Fig. 12).

Male. Purplish-brown: forewing with an extremely indistinct blackish transverse outwardly-curved narrow antemedial band, and an irregular postmedial band; a spot in middle of the cell, and a streak at the end: hindwing with a similar irregular discal band. Cilia entirely brown. Tegulæ with long lax divergent ochreous-brown hairs; abdomen cupreous-brown, anal tuft blackish; base of palpi and legs pale brownish-ochreous.

Expanse 1 inch.

Genus EBULEA.

Ebulea, Guénee, in Doubleday's List of Brit. Lep. p. 14 (1850); Stephens, Catal. Brit. Lep. Brit. Mus. p. 239 (1850); Guénee, Delt. et Pyral. p. 357 (1854); Stephens, Catal. Brit. Lep. Brit. Mus. p. 214 (1854).

Sitochroa (part), Hübner, Verz. bek. Schmett. p. 356.

Forewing rather short, broad; cell long, three-fifths the length; first subcostal at one-fifth before end of the cell, second trifid, fifth from the end; discocellular bent near the middle and lower end, radials from the angles; middle median at one-ninth before end of cell, lower at one-third; submedian straight, with a slender lower recurved branch: hindwing broad, exterior margin convex in the middle; cell one-third the length; two subcostals from beyond the end, upper partly joined to the costal; discocellular very oblique, concave, radial from lower end; middle median close to end, lower at one-third; a straight submedian and two internal veins. Body slender; labial palpi porrect, long, rather broad in the middle, projecting two-thirds beyond the head, pointed in front, laxly squamous, third joint concealed; maxillary palpi distinct, short, truncate at the tip; antennæ submoniliform, minutely ciliated; legs long, smooth, spurs rather stout, unequal.

Type, E. croccalis.

EBULEA CELATALIS.

Botys celatalis, Walker, Catal. Lep. Het. B. M. xviii. p. 657 (1859).

Pale ochreous-yellow; the costa of forewing and exterior borders darker coloured: forewing crossed by an indistinct brownish-ochreous curved antemedial line, an irregular discal denticulated line, a slight submarginal denticulated fascia, and a lunule at end of the cell: hindwing with an indistinct irregular discal line, and

curved submarginal fascia. Sides of thorax ochreous; front of head, palpi above, fore femora and tibiæ, and middle femora brownish-ochreous; palpi beneath and legs white.

Expanse 1 inch.

EBULEA FIMBRIATA.

Pale ochreous-yellow: forewing with an ochreous outwardly-oblique sinuous antemedial line, an irregular discal line, a lunule at end of the cell, and a slender brown marginal line: hindwing with an angular discal ochreous line, and a slender brown marginal line. Cilia ochreous, with two slender brown inner lines. Sides of thorax, palpi above, fore femora and tibiæ ochreous; sides of vertex, palpi beneath, and legs white; base of anal segment in male ochreous-brown.

Expanse $\frac{7}{10}$ inch.

EBULEA (?) CAMILLALIS.

Ebulea (?) Camillalis, Walker, Catal. Lep. Het. B. M. xviii. p. 749 (1859).

"Male. Pale luteous. Wings shining, rather narrow: forewings slightly rounded at the tips, with three oblique undulating partly double black lines; marginal points black, white-bordered, very minute; reniform mark large, oblique, ferruginous, white-speckled, white-bordered: hindwings white. Palpi short, porrect, compressed, extending a little beyond the head; third joint conical, less than half-length of second; antennæ stout, bare; abdomen whitish, not extending beyond the hindwings.

"Expanse 7 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus PIONEA.

Pionea, Guénee, in Duponchel's Catal. Lep. Eur. p. 203 (1844); Doubleday, List, Brit. Lep. p. 14 (1850); Guénee, Delt. et Pyral. p. 367 (1854); Walker, Catal. Lep. Het. B. M. xviii. p. 752.

Evergestis (part), Hübner, Verz. bek. Schmett. p. 354.

Margaritia (Sect. L. part), Stephens, Illust. Brit. Ent. iv. p. 57.

Wings broad: forewing moderately short, triangular; cell nearly two-thirds the length; first subcostal at one-third before end of the cell, third bifid, fifth from the end; discocellular concave, bent near the ends, radials from the angles; middle median from angle close to end of cell, lower at fully one-third; submedian straight, with a slender recurved lower branch: hindwing short, exterior margin convex; cell one-third the length; subcostals from the end, upper partly joined to costal; discocellular obliquely concave, radial from extreme lower end; middle median from

close to end of cell, lower at one-third; a straight submedian and two internal veins. Body moderately slender; anal tuft conspicuous; labial palpi oblique, first joint broad, rounded in front, second joint short, triangularly dilated with scales at tip; third joint linear, decumbent; maxillary palpi very distinct, linear; antennæ rather stout, simple; legs long, tibiæ squamous, spurs moderate, unequal.

Type, P. margaritalis.

PIONEA BREVIALIS.

Pionea brevialis, Walker, Catal. Lep. Het. B. M. xviii. p. 759 (1859).

Yellowish-ochreous: forewing crossed by an outwardly-oblique slender ochreous-brown sinuous antemedial line, and an outwardly-curved postmedial line; the medial area clouded with ochreous-brown scales; a slender brown reniform mark: hindwing paler, brightest externally. Cilia whitish, with brown inner line. Body, head, palpi above, and bands on forelegs yellowish-ochreous; palpi beneath and legs white.

Expanse $\frac{7}{10}$ inch.

Genus GODARA.

Godara, Walker, Catal. Lep. Het. B. M. xix. p. 808 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 383 (1863).

Male. Wings short: forewing broad, costa very convex at the base, exterior margin very slightly oblique, posterior margin slightly lobate and fringed in the middle; cell about two-thirds the length; first subcostal at one-third before end of the cell, third bifid, close to its end, fifth from end of cell; discocellular outwardly oblique, concave, radials from close to its ends; middle median close to end of cell, lower at nearly one-half; submedian curved at the base, with a slender curved lower branch. On the upper side is a reflexed tuft of hairs near the base of the costa, and on the under side is a row of rigid hairs extending from near the base below the median vein to its lower branch, these hairs being projected forward: hindwing broad, apex and exterior margin very convex; cell more than one-third the length, broad; costal and subcostals much recurved; two subcostals from end of cell, upper slightly joined to costal; discocellular very slender, oblique, concave, radial and upper median from extended lower end; middle median from close to end, lower at nearly one-half before the end, dilated at its base and recurved; submedian also recurved and touching the dilated portion of the median; two curved internal veins. Body slender, abdomen keeled above; labial palpi obliquely ascending, first joint broad and rounded in front, compressed, laxly squamous, second joint triangular, third short, almost linear; maxillary palpi erect, linear, extending to end of second joint of labial; antennæ short, thick, filiform; legs rather stout and

short, fore tibiæ and its basal joint of tarsi, and middle tibiæ pilose, spurs slender, unequal.

Female. No costal tuft on the upper side, and no tuft on the under side of the forewing; veins of hindwing normal; middle tibiæ not pilose.

GODARA COMALIS (Plate 179, Fig. 2, 2*a* ♂ ♀, 2*b* larva).

Pionea comalis, Guénee, Delt. et Pyral. p. 368 (1854), ♂.
Godara comalis, Walker, Catal. Lep. Het. B. M. xix. p. 809 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 383, pl. 12, f. 6; Snellen, Tijd. voor Ent. 1883, p. 134.
Pionea incomalis, Guénee, Delt. et. Pyral. p. 369, ♀.

Male. Pale ochreous: forewing more or less speckled with cinereous-brown or brownish-ochreous scales, which are mostly clustered about the discal area; crossed by a more or less defined curved subbasal and an antemedial pale-bordered blackish denticulated line, and a similar recurved postmedial line, followed by a marginal row of minute black points; two superposed black-bordered pure white spots at end of the cell; a curved reflexed tuft of grey and black hairs near base of the costa; cilia edged with cinereous, and continued along the posterior margin to the lobe, where it is edged with black: hindwing ochreous-white, the apical border brownish, with minute marginal dots. Thorax, head, and forelegs pale ochreous, speckled with brown; abdomen ochreous-white, tip brown.

Female. Paler: forewing with the white spots less defined; no costal tuft on the upper side, and no lengthened tuft beneath.

Expanse ♂ $\frac{8}{10}$, ♀ $\frac{9}{10}$ inch.

Larva moderately stout; pale violaceous-brown; with a paler dorsal band, and two lateral rows of black dots bordered by a lower white line, below which are some minute black dots; head red; second segment with a black dorsal band; front legs black. Pupa pale red; short and thick; head rounded, anal extremity obtuse.

Genus UDEA.

Udea, Guénee, in Duponchel's Catal. Lep. Eur. p. 209 (1844); Stephens, Catal. Brit. Lep. Brit. Mus. p. 240 (1850).
Margaritia (part) Stephens.
Scopula (group 4), Guénee, Delt. et Pyral. p. 398.

Forewing elongated, hardly triangular; cell about three-fifths the length; first subcostal at one-fifth before end of the cell, third trifid, fifth from the end; disco-cellular concave, radials from near middle and lower end; middle median from angle close to end, lower at one-third; submedian straight, with a slender recurved lower branch: hindwing triangular, exterior margin convex; cell one-third the length at

its upper end, half at its lower end; subcostals from beyond end of cell, upper partly joined to the costal; discocellular very oblique, concave, radial from extended lower end; middle median from close to end, lower at nearly half; a straight submedian and two internal veins. Body slender; labial palpi porrect, long, straight beneath, laxly squamous; maxillary palpi oblique, short, squamous; antennæ filiform; legs smooth, spurs moderately long, slender, outer spur very short.

Type, U. ferrugalis.

UDEA HYPATIALIS.

Scopula Hypatialis, Walker, Catal. Lep. Het. B. M. xix. p. 1014 (1859).

Pale brownish-ochreous: forewing crossed by a very indistinct slender blackish denticulated antemedial line, a recurved postmedial line, and a row of minute marginal points; an elongated large blackish orbicular spot and a large reniform mark; cilia cinereous-brown: hindwing whitish-ochreous, with an indistinct discal line, marginal points, and a dot at end of the cell. Thorax, head, and palpi above, pale brownish-ochreous; palpi beneath and legs whitish.

Expanse $\frac{7}{10}$ inch.

UDEA MACHÆRALIS.

Scopula Machæralis, Walker, Catal. Lep. Het. B. M. xix. p. 1013 (1859).

Ochreous-yellow: forewing crossed by a very indistinct ochreous antemedial line, an irregular postmedial line, and a marginal line; a slight lunule at end of the cell; hindwing whitish along the costal border; with indistinct ochreous discal irregular line, and a marginal line. Palpi beneath, legs, and body beneath white, fore tibiæ ochreous-yellow.

Expanse $\frac{8}{10}$ inch.

UDEA MANDRONALIS.

Scopula Mandronalis, Walker, Catal. Lep. Het. B. M. xix. p. 1014 (1859).

Pale ochreous-brown: forewing crossed by a very indistinct diffuse brown curved antemedial line, and an irregular discal line; a spot at end of the cell. Sides of the vertex, palpi beneath, and legs white; fore femora and tibiæ, and middle femora brown.

Expanse $\frac{8}{10}$ inch.

UDEA EXIMIALIS.

Scopula eximialis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1471 (1865).

Forewing bright ochreous-yellow, with a slender cinereous-black marginal line; cilia silvery-white: hindwing paler; cilia white. Body, head, palpi above, and bands on forelegs ochreous-yellow; palpi beneath and legs pure white.

Expanse $\frac{7}{10}$ inch.

UDEA (?) SUFFUSALIS.

Scopula suffusalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1471 (1865).

Dark purplish-brown. Wings slightly glaucescent: forewing crossed by a cupreous nearly straight antemedial line, a recurved postmedial lunular line, and a marginal line; reniform mark cupreous: hindwing with a short cupreous inner line from below end of the cell, an undulated discal line, and a marginal line. Cilia with a cupreous inner line. Thorax and base of abdomen, palpi, and fore and middle tibiæ above dark purple-brown; anal segments of abdomen, and legs ochreous; head dull ochreous, the front edged with white; tarsi white.

Expanse $\frac{6}{8}$ inch.

Genus PALIGA.

Male. Forewing broad, triangular; exterior margin slightly convex; cell more than half the length; first subcostal at one-fourth before end of the cell, second trifid; discocellular outwardly oblique, concave, radials from the ends: middle median from angle close to end, lower at fully one-fourth; submedian straight, with a slender lower recurved branch: hindwing broad, exterior margin very convex; cell one-third the length; subcostals from the end; upper partly joined to the costal; discocellular outwardly oblique, concave, radial from lower end; two upper medians from end of cell, lower at one-fourth; a submedian and two internal veins. Body rather stout, thorax robust; abdomen keeled above; labial palpi porrect, rostriform, pointed in front, broad at the base, laxly squamous, third joint concealed; maxillary palpi oblique, laxly scaled at tip and truncate; antennæ filiform; legs rather short, middle tibiæ incrassated and slightly fringed; spurs moderately long, unequal.

PALIGA DAMASTESALIS.

Scopula Damastesalis, Walker, Catal. Lep. Het. B. M. xix. p. 1013 (1859).

Ochreous-yellow: forewing with the veins dull crimson-speckled, the speckles being most distinct in the male; crossed by a dull crimson-speckled subbasal and an antemedial outwardly-oblique zigzag line, and an inwardly-oblique recurved discal denticulated line, followed by a less defined sinuous submarginal line, and a marginal pointed line; a crimson spot in middle of cell and a lunule at the end; cilia with a crimson inner line: hindwing paler yellow, semihyaline, with a slight crimson marginal pointed line; cilia entirely yellow. Thorax, head, and palpi above ochreous-yellow; thorax crimson-speckled; abdomen and legs paler yellow; fore and middle tibiæ with ochreous-yellow streak above.

Expanse $\frac{8}{10}$ to $\frac{9}{12}$ inch.

Genus DOSARA.

Dosara, Walker, Catal. Lep. Het. B. M. xix. p. 828 (1859).

Wings small: forewing rather long, narrow, apex pointed, exterior margin oblique; cell long, extending two-thirds the length; first subcostal emitted at one-fourth before end of the cell, third bifid, fifth from the end; discocellular concave in the middle, radials from near the ends; middle median from angle close to end, lower at one-third; submedian straight, with a slender recurved lower branch: hindwing rather long, narrow, apex rounded, exterior margin convex in the middle; cell one-third the length at its upper end, more than half at its lower end; two subcostals from beyond the end, upper partly joined to the costal; discocellular very long and oblique, concave at upper end, radial and upper median from extreme lower end, middle median very close to end, lower at nearly one-third; a submedian and two internal veins. Body moderately slender; labial palpi porrect, rostriform, pointed in front, laxly squamous beneath; maxillary palpi distinct; antennæ simple; legs slender, smooth, spurs moderately long, unequal.

Type, D. cælatalis.

DOSARA CÆLATALIS.

Dosara cælatalis, Walker, Catal. Lep. Het. B. M. xix. p. 829 (1859).

Forewing pale ochreous, more or less clouded with brownish or reddish-ochreous; a yellowish streak tipt with minute black scales below base of the cell, some indistinct brown-speckles representing the orbicular and reniform mark; a prominent denticulated diffuse black-speckled submarginal line with yellowish outer border, beyond which is a marginal black-pointed line; cilia with a blackish inner line: hindwing and abdomen whitish-ochreous. Thorax, head, and palpi above ochreous; palpi beneath and legs white.

Expanse $\frac{7}{12}$ inch.

DOSARA LAPSALIS.

Dosara lapsalis, Walker, Catal. Lep. Het. B. M. xix. p. 829 (1859).

Forewing pale ochreous-brown; with a dark brown fascia along the exterior border: hindwing cinereous-ochreous, slightly brownish along the exterior border. Cilia whitish-cinereous. Palpi and legs pale cinereous-brown; abdomen ochreous-brown.

Expanse $\frac{6}{12}$ inch.

Genus MECYNA.

Mecyna, Guénee, Delt. et Pyral. p. 406 (1854); Walker, Catal. Lep. Het. B. M. xix. p. 804; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 326.
Uresiphita (part), Hübner, Verz. bek. Schmett. p. 353.

Forewing long, exterior margin oblique; cell three-fifths the length; first subcostal at one-fifth before end of the cell, third bifid, fifth curved from the end of cell; discocellular slightly concave, radial from angle close to ends; middle median close to end of cell, lower at one-third; submedian curved, with a slender lower recurved branch: hindwing broad, exterior margin convex; cell short, less than one-third the length; subcostals from beyond end of cell, upper partly joined to costal; discocellular very slender, obliquely concave, radial from lower end; two upper medians from end of cell, lower at one-fifth; a curved submedian and two internal veins. Body moderately stout, abdomen extending beyond hindwings; labial palpi long, porrect, rostriform, tip slightly decumbent and attenuated, squamous; maxillary palpi short, distinct, dilated with lax scales at the tip; antennæ minutely pubescent in male; legs long, bare, middle tibiæ in male broadly flattened, with a slight groove on inner side containing a slight tuft; spurs long, unequal.

Type, M. polygonalis.

MECYNA DEPRIVALIS (Plate 179, Fig 1 ♂, 1*a* larva).

Mecyna deprivalis, Walker, Catal. Lep. Het. B. M. xix. p. 806 (1859).

Forewing ferruginous; crossed by a slender black outwardly-oblique undulated antemedial line, and a recurved postmedial denticulated line, the intermedial area being finely speckled with black scales, and with a blackish lunular mark at end of cell; hindwing ochreous-yellow, with an excavated bordered blackish marginal band, which terminates before the anal angle. Thorax, head, and palpi above ferruginous; palpi beneath and legs yellowish-white; fore tibiæ brownish; abdomen above ochreous-yellow.

Expanse 1 inch.

Larva rather stout; green above, olivaceous beneath; with a dorsal, subdorsal, lateral, and two sublateral rows of black spots, the subdorsal dotted with white; the latter with short intermediate yellow oblique streaks; head and a band on legs black. Pupa red; obtusely pointed at the ends.

Genus DYSALLACTA.

Dysallacta, Lederer, Pyral. Wien. Ent. Monat. vii. p. 393 (1863).

Forewing narrow, elongated, triangular; cell long, extending more than half the length; first subcostal emitted at two-fifths before end of the cell, second and third close to end, third bifid, fifth from the end; discocellular slender, outwardly

oblique, concave, radials from the ends; middle median from angle close to end of cell, lower at one-fourth; submedian recurved: hindwing triangular; cell more than one-third the length, broad; subcostals from end, upper partly joined to the costal; discocellular slightly angular in the middle, radial from lower end; middle median from angle close to end of cell, lower at one-fourth; a submedian and two internal veins. Body rather stout; anal tuft short and thick; labial palpi large, porrect, projecting more than half beyond the head, compressed, laxly squamous, broad, pointed in front, third joint concealed; maxillary palpi distinct, obliquely ascending, short, laxly squamous; antennæ rather thick, setaceous, with a conical appendage projecting at the base of the shaft; legs smooth, inner spurs very long, slender, outer spurs short.

DYSALLACTA NEGATALIS.

Phalangiodes Negatalis, Walker, Catal. Lep. Het. B. M. xvii. p. 468 (1859).
Dysallacta Negatalis, Lederer, Pyral. Wien. Ent. Monat. vii. p. 393, pl. 13, fig. 6 (1863), ♂.
Botys Monesusalis, Walker, Catal. Lep. Het. B. M. xviii. p. 653 (1859).
Botys Phanasalis, Walker, *id.* p. 727 (1859).

Pale purplish-cinereous. Wings hyaline, opalescent: forewing crossed by five blackish-bordered brownish-ochreous zigzag bands, the two outer bands with their inner edge denticulated; a black orbicular spot, and a reniform mark in the middle band: hindwing with a short black and ochreous streak on the discocellular and base of median veins, and a fuliginous-bordered denticulated brownish-ochreous marginal band. Cilia with a brown inner line. Body, head, and palpi brown-speckled; abdomen with blackish-speckled dorsal bands, and a black anal tuft in male; fore tibiæ and all the tarsi with brown bands; middle tibiæ with longitudinal brown streaks.

Expanse $1\frac{1}{10}$ inch.

Genus NOORDA.

Noorda, Walker, Catal. Lep. Het. B. M. xix. p. 978 (1859).

Forewing narrow, rather long, apex obtuse, exterior margin hardly oblique; cell long, extending two-thirds the length; first subcostal emitted at one-fourth before end of the cell, second free, third bifid, fifth from end of the cell; discocellular outwardly oblique, radials from near the ends; middle median from close to end of cell, lower at nearly one-third; submedian straight: hindwing rather long and broad; exterior margin very oblique, slightly convex; cell broad, extending about two-fifths the length; subcostals from end, upper branch joined for a short distance above its end to the costal; discocellular very oblique, deeply concave, radial from extended lower end; middle median close to end, lower about one-third; submedian and internal veins slightly curved. Body rather stout; labial palpi long, smoothly

squamous, second joint slightly ascending, third joint porrect, subclavate, almost as long as the second, with which it forms a slight angle; maxillary palpi distinct, laxly squamous, ascending; antennæ slender, simple; legs rather short, smooth, spurs long, slender.

NOORDA BLITEALIS (Plate 178, Fig. 11).

Noorda blitealis, Walker, Catal. Lep. Het. B. M. xix. p. 979 (1859).
Scopula subjectalis, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1472 (1865).

Forewing dark olive-brown, black-speckled; the speckles partly confluent and forming short strigæ; a black-speckled transverse curved medial line, an oblique spot at end of the cell, an oblique angulated submarginal line, and a straight marginal line; the lines bordered with chalybeous scales in some lights; a whitish lower basal spot, and the discal area also slightly whitish: hindwing purplish-white, hyaline, with a cupreous-brown marginal band; cilia white, with an inner brown line. Body brown; abdomen with chalybeous iridescent black-bordered bands; fore tibiæ and tarsi with brown bands.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Genus SCOPARIA.

Scoparia, Haworth, Lep. Brit. p. 498 (1812); Guénee, Delt. et Pyral. p. 416; Walker, Catal. Lep. Het. B. M. xix. p. 814; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 346.
Gesneria, Hübner, Verz. bek. Schmett, p. 368 (1825-7).
Eudorea, Curtis, Brit. Ent. iv. fol. 170 (1828); Duponchel, Lep. Fr. viii. 2, p. 12 (1831); Stephens, Brit. Ent. Haust. iv. p. 214; Duponchel, Eur. Lep. p. 319; Stephens, Catal. Brit. Lep. B. M. pt. xii. p. 21 (1852).
Scopæa, Haworth, Lep. Brit. p. 390 (1829).

Forewing narrow, rather long; cell two-thirds the length; first subcostal at one-fourth before end of the cell, second and third near the end, third bifid; discocellular slender, erect, bent near the ends, radials from the angles; middle median from near end of the cell, lower at one-fourth; submedian with a short recurved lower branch: hindwing rather long, broad, exterior margin convex; cell fully half the length; subcostals from beyond end of the cell, upper slightly touching the costal; discocellular outwardly-oblique, deeply concave, radial curved upward from lower end; middle median close to end of cell, lower about one-third; a submedian and two internal veins. Body slender; labial palpi porrect, rostriform, projecting two-thirds beyond the head, laxly squamous; maxillary palpi long, standing out above labial, dilated with lax scales at the tip; antennæ filiform; legs rather thick and short, tibiæ clothed with fine hairy scales, spurs unequal.

Type, S. Pyralella.

SCOPARIA CONGESTALIS.

Scoparia congestalis, Walker, Catal. Lep. Het. B. M. xix. p. 826 (1859).

Cinereous. Forewing densely speckled with brown scales; crossed by an

outwardly-oblique waved antemedial white line, and an inwardly-oblique undulated postmedial line; a slight whitish orbicular and reniform mark; cilia cinereous-white, with a slight brown inner line. Thorax, head, palpi above, and legs brown-speckled; palpi beneath whitish; abdomen cinereous.

Expanse $\frac{6}{12}$ inch.

SCOPARIA MURIFICALIS.

Scoparia murificalis, Walker, Catal. Lep. Het. B. M. xix. p. 826 (1859).

Whitish-cinereous. Forewing thickly speckled with brown scales; crossed by an ill-defined antemedial dentated white-bordered black-speckled line, and a similar outwardly-curved postmedial denticulated line; a blackish orbicular and reniform mark, and a spot below the former; a marginal row of confluent spots; cilia with alternate brown inner row of spots: hindwing and abdomen pale whitish-cinereous. Thorax, head, and palpi brown-speckled; fore and middle legs with brown bands.

Expanse $\frac{6}{10}$ inch.

Genus HELLULA.

Hellula, Guénee, Delt. et Pyral. p. 415 (1854); Walker, Catal. Lep. Het. B. M. xix. p. 813 (1859); Lederer, Pyral. Wien. Ent. Monat. vii. p. 351 (1863); Meyrick, Tr. Ent. Soc. Lond. 1884, p. 316.

Oebia (part), Hübner, Verz. bek. Schmett. p. 362.

Male. Forewing hardly elongate, triangular, exterior margin moderately oblique; cell very long, extending two-thirds the length; first subcostal emitted at one-fourth before end of the cell, third bifid, fifth from the end; discocellular outwardly oblique, slightly concave, radials from close to each end; middle median from close to end of cell, lower nearly one-third: hindwing somewhat broad; costal vein tumid at the base, much recurved; cell two-fifths the length; subcostals from the end; discocellular very obliquely concave, radial from extreme lower end; two upper medians from end of cell, lower at one-third. Body slender; labial palpi slightly ascending; second joint broadly quadrate, third joint short, very distinct, truncate; maxillary palpi minute; antennæ rather thick, filiform; legs slender, spurs nearly equal.

Type, H. undalis.

HELLULA UNDALIS.

Phalæna undalis, Fabricius, Ent. Syst. iii. 2, p. 226 (1794).

Pyralis undalis, Hübner, Pyral. 19, 7, pl. 14, f. 93; Treitschke, Sch. Eur. vii. p. 128; Duponchel, Lep. Fr. viii. p. 160, pl. 221, f. 1; H. Schæff. Eur. Schmett. iv. p. 10, 1, pl. 8, f. 54.

Hellula undalis, Guénee, Delt. et Pyral. p. 416; Walker, Catal. Lep. Het. B. M. xix. p. 813.

Oebia undulalis, Hübner, Verz. bek. Schmett. p. 362 (1825-7).

Scoparia alconalis, Walker, Catal. Lep. Het. B. M. xix. p. 827 (1859).

Scoparia optatusalis, Walker, *id.* p. 1018 (1859).

Forewing pale brownish-ochreous; crossed by a very slender subbasal, ante-

medial, and a postmedial irregular denticulated white line; the outer line curved outward beyond the cell; a marginal row of white-bordered black dots: hindwing cinereous-white, the outer border with a slender pale brownish-ochreous marginal line. Cilia white, with pale brown inner line. Body pale brownish-ochreous; palpi and legs whitish; tip of palpi brownish.

Expanse $\frac{7}{10}$ inch.

Genus NOMOPHILA.

Nomophila, Hübner, Verz. bek. Schmett. p. 368 (1825-7); Stephens, Brit. Ent. Haust. iv. p. 312; Lederer, Pyral. Wien. Ent. Monat. vii. p. 379; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 306.

Stenopteryx, Guénee, in Duponchel's Catal. Lep. Eur. p. 209 (1844); Delt. et Pyral. p. 413; Walker, Catal. Lep. Het. B. M. xix. p. 811.

Forewing long, very narrow, exterior margin slightly oblique; cell very long, nearly two-thirds the length; first subcostal about one-sixth before end of the cell, second and third close to the end, third bifid, fifth from the end; discocellular concave in the middle, bent near the ends, radials from the angles; middle median from angle close to end of cell, lower at one-fifth; submedian with a slender recurved lower branch: hindwing long, rather broad, triangular, apex produced, exterior margin convex; cell about half the length; subcostals from beyond end of the cell, upper partly joined to the costal; discocellular outwardly oblique, radial from lower end; two upper medians from end of cell, lower at one-fifth; a submedian and two internal veins. Body slender; labial palpi porrect, rostriform, pointed at the tip, laxly squamous, third joint concealed; maxillary palpi very short, filiform; legs long, slender, smooth; spurs slender, unequal, hind spurs rather short.

NOMOPHILA NOCTUELLA.

Tinea noctuella, Schiff. Wien. Verz. p. 136 (1776).

Nomophila noctuella, Lederer, Pyral. Wien. Ent. Monat. vii. p. 379; Meyrick, Trans. Ent. Soc. Lond. 1884, p. 306.

Pyralis hybridalis, Hübner, Pyral. 29, 20, pl. 17, fig. 114 (1797).

Nomophila hybridalis, Hübner, Verz. bek. Schmett. p. 368; Stephens, Illust. Brit. Ent. Haust. iv. p. 312.

Stenopteryx hybridalis, Guénee, in Duponchel's Catal. Lep. Eur. p. 209; Delt. et Pyral. p. 414; Walker, Catal. Lep. Het. B. M. xix. p. 812.

Cinereous-brown: forewing with some indistinct blackish subbasal streaks, a transverse antemedial line, a large constricted blackish-bordered darker-brown mark extending across middle of the cell to the submedian, a similar smaller mark at end of the cell, followed by an irregular discal denticulated line and marginal points; some costal black points before the apex; these markings are all less defined in the male: hindwing paler cinereous-brown. Cilia cinereous-white. Thorax blackish-

speckled; abdomen pale cinereous-brown; palpi above and legs above cinereous-brown; palpi and legs beneath white.

Expanse 1 to $1\frac{1}{8}$ inch.

Family PHYCITIDÆ.

Forewings oblong, or elongate, slightly folded in repose, antennæ simple in male, often curved near the base, sometimes with a tuft of scales in the curve; labial palpi generally of moderate length and ascending, sometimes long and porrected; maxillary palpi usually penicillate or filiform, generally concealed, sometimes absent.

Larva with 16 legs. Feeds on the leaves or on the stems of plants; some in dried animal or vegetable substances; generally spinning silken galleries.

Genus ANERASTIA.

Anerastia, Hübner, Verz. bek. Schmett. p. 367 (1825-7); Zeller, Isis, 1839, p. 177; Guénee, Micro. p. 84 (1845); Stainton, Catal. Tin. p. 4 (1849).

Araxes, Stephens, Illust. Haust. iv. p. 315 (1834).

Abraxes, Curtis, Guide, 2nd ed. p. 207 (1837).

Forewing narrow, long, costa arched, exterior margin oblique, convex; cell two-thirds the length; first subcostal about one-seventh before end of the cell, second close to end, third bifid; discocellular bent near upper end, radial from the angle; middle median close to end of cell, lower at one-eighth; submedian straight: hindwing ample; two subcostals from end of cell, upper joined to costal to nearly half its length; cell deeply concave; medians from end of the cell, the two upper on a footstalk half beyond the cell; submedian and two internal veins widely separated. Body slender; antennæ flattened, submoniliform; head prominently convex; labial palpi porrect, long, second joint pilose above, third joint nearly half-length of second; maxillary palpi very minute; legs squamous, spurs unequal.

Type, A. lotalis, Hübn.

ANERASTIA ADAPTELLA.

Pempelia adaptella, Walker, Catal. Lep. Het. B. M. xxvii. p. 74 (1863).

"Male. Fawn colour: forewings dingy yellowish, minutely black speckled: hindwings whitish, semihyaline. Abdomen cinereous."

Expanse $\frac{8}{10}$ inch.

ANERASTIA CELSELLA.

Araxes Celsella, Walker, Catal. Lep. Het. B. M. xxvii. p. 193 (1863).

Forewing ochreous; with the costal border broadly and the posterior border

slightly reddish-ochreous: hindwing ochreous-white. Thorax, head, palpi, and legs reddish-ochreous.

Expanse $\frac{5}{8}$ inch.

ANERASTIA INFICITA.

Acrobasis inficita, Walker, Catal. Lep. Het. B. M. xxvii. p. 30 (1863).

"Pale dull straw-colour: forewings mostly clouded with brownish-cinereous; submarginal line pale, denticulated: hindwings paler, slightly hyaline.

"Expanse $\frac{6}{8}$ inch."

Genus HOMŒOSOMA.

Homœosoma, Curtis, Ent. Mag. i. p. 190 (1833); Stephens, Illust. Haust. iv. p. 311 (1834); Zeller, Isis, 1848, p. 599; Stainton, Catal. Tin. p. 4 (1849); *id.* Manual, ii. p. 169 (1859).

Wings small. Forewing long, very narrow; cell two-thirds the length; first subcostal about one-fourth before end of cell, second and third from angle near the end, third bifid at its tip, fifth from the end of cell; discocellular concave, radial and upper median on a footstalk at more than half beyond the cell, middle and lower median at equal distances near end of cell; submedian straight: hindwing narrow, apex convex, exterior margin very oblique, convex; cell one-third the length; two subcostals from beyond end of the cell, upper coalescent with costal from near the base to near its tip; discocellular slightly concave, no radial; three medians, the middle branch very close to end of cell, lower at nearly one-third before the end, submedian and two internal veins widely separated. Body slender; antennæ of male thick, flattened, finely pubescent in front; labial palpi porrect, slender, projecting half beyond the head, clothed with fine hairy scales; maxillary palpi short; legs rather stout, squamous, spurs slender, unequal.

Type, H. sinuella.

HOMŒOSOMA (?) LINCUSALIS.

Homœosoma (?) *Lincusalis*, Walker, Catal. Lep. Het. B. M. xxvii. p. 26 (1863).

"Male. Very pale fawn-colour, whitish-cinereous beneath. Forewings rectangular at the tips; exterior border hardly oblique; a slight black line in the disc near the base, and another extending from the reniform mark towards the exterior border; reniform mark whitish, accompanied by a black point; a lanceolate black streak in the disc behind it; marginal points black: hindwings whitish-cinereous. Palpi porrect, lanceolate, as long as the breadth of the head, third joint conical.

"Expanse 12 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

HOMŒOSOMA (?) GETUSALIS.

Homœosoma (?) Getusalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 26 (1863).

"Male. Whitish-cinereous, brownish-cinereous beneath. Forewings rectangular at the tips, exterior border rather oblique, interior angle much rounded; a blackish line at one-third of the breadth from the costa; marginal points black: hindwings brownish-cinereous. Palpi porrect, not longer than the breadth of the head, second joint slightly tufted above, third acutely conical, about half-length of second; antennæ stout; abdomen extending somewhat beyond the hindwings, apical tuft rather long.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus ACROBASIS.

Acrobasis, Zeller, Isis, 1839, p. 176; *id.* 1848, p. 606; Stainton, Catal. Tin. p. 5 (1849); *id.* Manual, ii. p. 170 (1859).

Wings small. Forewing rather long, narrow, broadest at the end; cell two-thirds the length; first subcostal at one-fourth before end of cell, second and third near the end, third bifid at half its length, fifth from end of cell; discocellular concave, radial from lower end; middle and lower median close to end of cell; submedian straight: hindwing rather broad, exterior margin convex in middle; cell nearly half the length, narrow; two subcostals from the end, upper joined to costal to about half its length; discocellular very concave, very oblique posteriorly, radial and upper median on a footstalk at nearly half beyond the cell, middle median from end of cell, lower at about one-fourth before the end; a submedian and two internal veins. Body slender; labial palpi curved upward, rather slender, finely squamous, third joint pointed; maxillary palpi short, slender, pointed; antennæ slender, finely pubescent in front; legs stout, tarsi short, spurs rather short, unequal.

Type, A. consociella.

ACROBASIS LIGERALIS.

Myelois Ligeralis, Walker, Catal. Lep. Het. B. M. xxvii. p. 37 (1863).

Forewing lilacine-grey; slightly clouded with brown and thinly speckled with black scales; the black scales being clustered at the base; crossed by an undulated medial and a submarginal slender black line, followed by a straight marginal line: hindwing whitish, semihyaline, with a slender brown marginal line. Body, palpi, and legs lilacine-grey; base of palpi, tibiæ, and tarsi with brown bands.

Expanse $\frac{8}{10}$ inch.

Genus AURANA.

Aurana, Walker, Catal. Lep. Het. B. M. xxvii. p. 122 (1863).

Female. Forewing elongate, rather narrow, apex hardly acute, exterior margin slightly convex and oblique; cell two-thirds the length; first subcostal emitted at one-fourth before end of the cell, second and third approximate, third bifid, fifth from the end; discocellular oblique, radial from lower end; median branches recurved, middle and lower branches from close to end of the cell; submedian curved at the base: hindwing ample, triangular; cell one-third the length; two subcostals from end, upper partly joined to the costal; discocellular concave, radial and upper median on a footstalk half beyond the cell; middle median from end of the cell, lower at one-third before the end; a submedian and two internal veins. Body rather stout; labial palpi obliquely ascending, curved, second joint reaching level of the vertex, squamous, third joint lanceolate, nearly as long as the second; maxillary palpi prominent, extending to nearly end of the second joint of labial, squamous; antennæ simple; legs short, very stout, hind spurs long, slender, unequal.

AURANA ACTIOSELLA.

Aurana Actiosella, Walker, Catal. Lep. Het. B. M. xxvii. p. 122 (1863).

Female. Forewing cinereous purplish-brown, sparsely speckled with darker brown scales; with a broad white triangular transverse subbasal brown-margined patch, and a similar white broad costal outer patch, followed by a brown-bordered white submarginal line, and a row of small black marginal spots; two small black spots also at end of the cell within the costal patch: hindwing cinereous, slightly hyaline, the veins brownish. Cilia cinereous, with brown inner line. Body cinereous-brown; palpi and legs cinereous-white, with dark brown bands.

Expanse $\frac{6}{10}$ inch.

Genus SALEBRIA.

Salebria, Ragonot, Monog. Phycitidæ (MS.).

"Forewing rather elongate, narrow at the base, widening before the apex, slightly convex on the costa towards the apex. Venation ordinary: forewings with 9 from the cell; 4 and 5 converging to a point, but separate; hindwings with 8 veins; 3 and 5 appear to be on a long stem. Palpi ascending; maxillary palpi in form of a yellowish pencil of hairs; antennæ much thickened, flattened laterally, slightly curved towards its base, the joints in the curve produced into distinct brown horny teeth without any trace of scales, basal joint long and thick."

SALEBRIA UNDULATELLA.

Acrobasis undulatella, Walker, Catal. Lep. Het. B. M. xxxv. p. 1711 (1866).

Forewing cinereous violaceous-brown, very sparsely black-speckled; anterior

border thickly speckled with hoary white scales; crossed by a medial and a submarginal black-speckled bordered ferruginous band, the inner band acutely bent outward in middle of the cell, the outer band undulated and bent acutely inward at the lower median vein; a black-speckled lunular spot at end of the cell, and a marginal lunular line: hindwing and abdomen pale cinereous-brown; cilia whitish. Thorax violaceous-brown, hoary speckled; head, palpi, and legs hoary white, with brown bands.

Expanse $\frac{9}{10}$ inch.

"Closely allied to the European *S. palumbella*, Fabr. Darker coloured; the hindwing being almost as dark tinted as the forewing. On the forewing the medial band is distinctly more acutely angulated within the cell." (*Ragonot*, MS.)

SALEBRIA MINUTELLA.

Salebria minutella, Ragonot, Monogr. Phycidæ (MS.).

"Forewing grey, tinged with pale brown in the basal area and along the dorsal fold, the median space with numerous scattered black scales, hence darker than the rest of the wing; the lines which limit it hardly darker, indistinct; a rather long patch of black scales on the inner margin at some distance before the first line, and produced towards it along the dorsal vein; the first line begins a little before the middle of the costa, is slightly oblique and indented on the dorsal fold; the second line is also slightly oblique, indented on the discal and dorsal folds and produced on the median nervures; it is followed at some distance by an indistinct dark line; cilia grey, with two fuscous lines and preceded by a series of small black spots: hindwings semi-transparent, pale fuscous, darker on the nervures and along the hind margin; cilia white, with a fuscous line at the base. Head, thorax, and palpi greyish, with brownish scales; antennæ greyish-brown; abdomen greyish-brown, anal segment yellowish, beneath yellowish, the anal extremity brownish; legs and body beneath greyish.

"Expanse 15 m."

Hab. Ceylon.

"Somewhat resembles *S. mundalis*, Walker, but is smaller, the latter having a large tuft of scales in the curve of the antennæ, and the joints are not produced." (*Ragonot*, MS.)

Genus CANTHELIA.

Canthelia, Walker, Catal. Lep. Het. B. M. xxxv. p. 1726 (1866).

Forewing narrow; cell three-fifths the length; first subcostal at about one-fourth before end of the cell, second free, third bifid, fifth from end of cell; discocellular slightly concave, radial from lower end; middle median close to end of the

cell, lower about one-eighth; submedian straight: hindwing long, ample; cell one-third the length; two subcostals from end of cell, base of upper slightly joined to the costal; discocellular concave; radial and upper median on a footstalk at more than half beyond the cell, middle median from end of cell, lower at one-fourth before the end; submedian and two internal veins straight. Body moderately stout; front of head conical; labial palpi curved, ascending, squamous in front, second joint reaching the vertex, third joint lanceolate, about half-length of second; maxillary palpi short; antennæ stout, flattened, smooth; legs stout, smooth, spurs unequal.

CANTHELIA ÆGNUSALIS.

Pyralis ægnusalis, Walker, Catal. Lep. Het. B. M. xix. p. 905 (1859).
Homœosoma gratella, Walker, Catal. Lep. Het. B. M. xxvii. p. 26 (1863).
Canthelia gratella, Walker, *id.* xxxv. p. 1727 (1866).

Forewing dull ochreous-yellow; with a purplish-red curved streak from base of the cell to near middle of posterior margin, followed by a transverse medial speckled streak, a linear mark at end of the cell, a waved discal transverse streak, and a broader marginal band, these markings being slightly confluent: hindwing paler, with a slight brown marginal line. Body and legs dull ochreous-yellow; front of thorax, head, palpi, and forelegs above purplish-red.

Expanse $\frac{6}{8}$ to $\frac{7}{8}$ inch.

CANTHELIA LATERITIALIS.

Eurhodope lateritialis, Walker, Catal. Lep. Het. B. M. xxvii. p. 74 (1863).
Nephopteryx concolorella, Walker, Catal. Lep. Het. B. M. xxxv. p. 1721 (1866).

Forewing brick-red; costa whitish; with three indistinct chalybeous-black longitudinal fasciæ, which are partly confluent near the base; cilia cinereous-brown: hindwing pale cinereous-brown; thorax, head, palpi, and forelegs brick-red; abdomen, middle and hindlegs paler.

Expanse $\frac{7}{10}$ inch.

Genus NEPHOPTERYX.

Nephopteryx, Hübner, Verz. bek. Schmett. p. 370 (1825-7); Zeller, Isis, 1839, p. 179.

Forewing long, costa slightly arched near end; cell two-thirds the length; first subcostal about one-sixth before end of cell, second from end, trifid; discocellular outwardly oblique, bent near upper end and concave hindward, upper radial from the angle, lower radial and upper median from end of cell, middle median close to the end, lower at about one-eighth; submedian straight: hindwing ample; cell one-third the length; two subcostals from beyond end of the cell, upper partly joined to costal from the base; discocellular deeply concave, lower end prolonged, radial and

upper median on a footstalk at nearly half beyond end of the cell, middle median from end of cell, lower at nearly one-third before the end; a submedian and two internal veins. Body slender; labial palpi obliquely ascending, rather slender, squamous, apical joint very short; maxillary palpi distinct, slender; antennæ thick, finely pubescent in front, base of shaft twisted and somewhat tumid; legs rather stout, short, squamous, spurs slender, unequal.

Type, N. rhenella.

NEPHOPTERYX ACISALIS.

Nephopteryx acisalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 66 (1863).

Cinereous-brown: forewing crossed by indistinct cinereous-bordered blackish denticulated lines, of which the antemedial and postmedial are more distinctly black pointed; a black spot at end of the cell, and a marginal row of black spots: hindwing, body, and legs paler cinereous-brown; tarsi with pale bands.

Expanse ♂ $\frac{9}{10}$ inch.

NEPHOPTERYX PHYCISELLA.

Nephopteryx Phycisella, Walker, Catal. Lep. Het. B. M. xxx. p. 957 (1864).

"Female. Ferruginous-cinereous; forewing speckled with ferruginous, and with a blackish oblique interior band, which is concise on the inner side and diffuse exteriorly; hindwing cinereous. Thorax with a blackish band; abdomen cinereous.

"Expanse 12 lines."

NEPHOPTERYX (?) ETOLUSALIS.

Nephopteryx (?) *Etolusalis*, Walker, Catal. Lep. Het. B. M. xxvii. p. 64 (1863).

"Female. Brown, brownish-cinereous beneath. Forewings narrow, rounded at the tips, extremely oblique along the exterior border; lines indistinct and incomplete, represented by black pale-bordered points; a subquadrate whitish-cinereous patch extending from the interior border to the reniform mark, which has a pale incomplete subquadrate border: hindwings brownish-cinereous. Palpi obliquely ascending, hardly rising above the vertex, third joint acutely conical, less than half-length of second; abdomen cinereous, extending some distance beyond the hindwings; legs stout; spurs very long.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

NEPHOPTERYX (?) HARPAXALIS.

Nephopteryx (?) *Harpaxalis*, Walker, Catal. Lep. Het. B. M. xxvii. p. 65 (1863).

"Male. Cinereous, a little paler beneath. Forewings a little broader than those

of *N. Etolusalis*, more acute at the tips, and slightly convex towards the base of the interior border; lines brownish, very oblique, undulating, denticulated, indistinct, pale bordered; marginal line blackish; costal subapical points whitish: hindwings with an indistinct pale submarginal line. Palpi obliquely ascending; third joint linear, rounded at the tip, more than half-length of second; abdomen extending nearly half its length beyond hindwings.

"Expanse 11 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

NEPHOPTERYX (?) CYLLUSALIS.

Nephopteryx (?) Cyllusalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 65 (1863).

"Female. Cinereous-brown, more cinereous beneath, like *N. Etolusalis*. Forewings with black irregular cinereous-bordered partly raised mostly complete lines; exterior line much bent, its hind part more distinct than the other lines; reniform mark indicated by a few black points; an indistinct cinereous patch by the middle of the interior border, traversed by an angular black line, whereas the corresponding line in *N. Etolusalis* is straight; submarginal streaks cinereous; marginal line black, interrupted: hindwings vitreous, with broad brown borders.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

NEPHOPTERYX (?) ÆOLUSALIS.

Nephopteryx (?) Æolusalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 66 (1863).

"Female. Hoary. Forewings with indistinct traces of denticulated brown lines; exterior part mostly brown; submarginal line hoary, denticulated; marginal lunules dark brown, hoary-bordered; tips rounded; exterior border very oblique. Head and fore part of thorax blackish-brown; palpi porrect; third joint conical, not more than one-third the length of second; abdomen, hindwings, and underside brownish-cinereous.

"Expanse 9 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

NEPHOPTERYX (?) ARGIADESALIS.

Nephopteryx (?) Argiadesalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 66 (1863).

"Male. Brown, brownish-cinereous beneath. In structure like *N. acicalis*.

Forewings tinged with hoary, more especially along the black lines, which are much like those of *N. acicalis;* a black patch by the interior border at a little before the middle: hindwings brown. This may be a variety of *N. acicalis*, but the latter species has no trace of the patch.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus MAGIRIA.

Magiria, Zeller, Stettin Ent. Zeit. (1867), p. 393, pl. 2, f. 2, ♂.

Male. Forewing elongated, rather narrow, cell fully two-thirds the length; first subcostal emitted at one-third before end of the cell, second close to the end, third and fifth from the end, third bifid; discocellular very slender; radial and upper median from lower end of the cell, middle median close to end, lower about one-eighth; submedian nearly straight: hindwing ample, long, broad, triangular; cell less than one-third the length; subcostals at one-fourth beyond end of the cell, joined to the costal at their base; discocellular outwardly oblique, radial and upper median on a footstalk half beyond the cell; middle median from the end, lower at one-fourth before the end; submedian straight, two internal veins slightly curved. Body rather stout; labial palpi ascending, and in the male recurved backward over the head, coarsely squamous, second joint long, much dilated, spatula pointed at its end, and concave on its inner side, apical joint minute, conical, in the female short, reaching only to vertex, apex pointed; maxillary palpi distinct, short, squamous in the male, and the apex furnished with a long pencil of fine hairs, which are inclosed within the cavity of the labial, slender in the female; antennæ short, stout in the male, pubescent in front, base of shaft dilated, concave, and compactly tufted in front; legs stout, coarsely squamous; tibiæ slightly pilose above; spurs long, unequal. Female: wings as in male. Labial palpi smaller, shorter, obliquely ascending, squamous, of equal width throughout, third joint about one-third length of second; maxillary palpi not tufted at the tip; antennæ not dilated at the base.

Type, M. imparella, Zeller (l. c. pl. 2. f. 2).

Hab. E. India.

MAGIRIA ROBUSTA (PLATE 184, FIG. 4 ♂, 4*a* larva).

Female. Forewing pale ochreous-brown, very thickly speckled with cinereous-white along the anterior border, and sparsely speckled with black scales along the posterior border; all the veins, excepting the submedian, lined with black, which are crossed by a discal denticulated whitish-speckled line; marginal points white:

hindwing ochreous-white, semihyaline, slightly opalescent, with a pale ochreous-brown slender marginal border; cilia white, with a brown inner line. Body, palpi, and legs ochreous-brown; sides of collar, tegulæ, and base of abdomen with a cluster of black speckles; forelegs above dark-brown, with white bands; middle and hind-legs whitish speckled; a brown band on middle tibiæ, and whitish bands on the tarsi.

Expanse ♀ $1\frac{3}{10}$ inch.

Larva thick; with sixteen legs; purplish-grey; with a few short fine hairs; segments spotted with black and with a lateral row of red spots; head and a dorsal patch on second segment black. Pupa dark purple-brown, enclosed within an elongated slight silken cocoon attached to the stem of food plant.

"Larva feeds within the branchlets of mahogany." (*Thwaites.*)

Genus MELLA.

Etiella,* Zeller, Isis, 1846, p. 755.
Mella, Walker, Catal. Lep. Het. B. M. xix. p. 1017 (1859).
Assara, Walker, *id.* xxvii. p. 79 (1863).
Modiana, Walker, *id.* xxvii. p. 82 (1863).
Alata, Walker, *id.* xxvii. p. 108 (1863).
Arucha, Walker, *id.* xxvii. p. 201 (1863).

Forewing long, narrow; with a transverse antemedial curved-row of raised scales; cell two-thirds the length; first subcostal emitted at one-third before end of the cell, second close to the end, third bifid; discocellular bent close to each end, concave in the middle, radials from the angles; middle median close to end of the cell, lower at one-seventh; submedian nearly straight: hindwing ample; cell two-fifths the length; two subcostals emitted at some distance beyond end of the cell, both joined to the costal at their base; discocellular very slender, obliquely concave, radial and upper median on a footstalk at half beyond the cell, middle median from end of the cell, lower at one-third; median vein from the base to lower branch posteriorly fringed in the male; submedian and two internal veins straight. Body rather stout; head prominent, conical in front; palpi porrect, very long, smooth, third joint fusiform, one-fourth length of the second; antennæ in male thick, flattened, pubescent in front, basal joint tumid and with two long plumose tufts at the tip on each side of the base of the shaft; antennæ simple in female; legs rather stout, middle and hind tibiæ laxly squamous on the outer edge, spurs slender, unequal.

Type, M. Zinckenella.

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* This name having been founded upon one of the synonyms of the typical species cannot therefore be used.

MELLA ZINCKENELLA.

Phycis Zinckenella, Treitschke, Schmett. Eur. ix. p. 201 (1832).
Phycis Etiella, Treitschke, *id.* x. pp. 174 et 276 (1835).
Etiella Zinckenella, Zeller, Isis, 1846, p. 755.
Chilo majorellus, Costa, Faun. di Napoli, Lep. p. 5, pl. 8, fig. 1, ♀ (1836).
Chilo colonellus, Costa, *id.* p. 7, pl. 8, f. 2, ♂.
Mella dymnusalis, Walker, Catal. Lep. Het. B. M. xix. p. 1017 (1859).
Assara albicostalis, Walker, *id.* xxvii. p. 80 (1863).
Modiana scittivittalis, Walker, *id.* xxvii. p. 83 (1863).
Alata anticalis, Walker, *id.* xxvii. p. 108 (1863).
Crambus sabulinus, Butler, Ann. and Mag. Nat. Hist. ser. v. vol. iv. p. 455 (1879).

Forewing pale purplish cinereous-brown, with a whitish band extending below the costal edge; crossed by an antemedial curved row of reddish raised scales, which is outwardly bordered by a diffused reddish band, and inwardly by a broad blackish-grey border: hindwing purplish brownish-white, with brown veins, marginal line, and interciliary band; cilia edged with white. Body pale purplish-brown; sides of vertex and base of palpi beneath whitish; palpi and forelegs dark brown; hindlegs paler.

Expanse $\frac{9}{10}$ to 1 inch.

Genus EPICROSIS.

Epicrosis, Zeller, Isis, 1848, p. 878.

Forewing rather short and broad; cell about three-fifths the length; first subcostal emitted at one-third, second and third approximate and from angle near the end, third bifid; discocellular slightly concave, radial from close to lower end; middle median close to end of cell, lower at one-eighth; submedian straight: hindwing ample, broad, apex convex; cell fully one-third; subcostals from the end, upper partly joined to the costal; discocellular obliquely concave, radial and upper median on a footstalk half beyond the cell; middle median from end of cell, lower at one-fourth; a straight submedian and two internal veins. Body rather stout; palpi ascending, slender, lanceolate, second joint reaching the vertex, third joint more than half-length of second, acute at the tip; antennæ slender, smooth; legs rather stout, squamous, spurs unequal.

EPICROSIS FESTIVELLA (Plate 184, Fig. 8.)

Epicrosis festivella, Zeller, Isis, 1848, p. 878.

Forewing purplish cupreous-red, the base obliquely smeared with flesh colour; crossed by an outwardly-oblique medial white band with black-speckled borders, beyond which, at the end of the cell, is a large fleshy-white patch extending upwards to the costa, the patch being bordered by a dark streak at end of the cell, and the

darker reddish-brown outer border of the wing: hindwing pale cuprescent cinereous-brown, cilia edged with white. Thorax, head, palpi, and forelegs cupreous-red: thorax and tegulæ pale streaked; abdomen and legs pale cuprescent-cinereous, tarsi with brown bands.

Expanse $\frac{6}{10}$ inch.

Genus MYELOIS.

Myelois, Hübner, Verz. bek. Schmett. p. 371 (1825-7); Zeller, Isis, 1839, p. 176; *id.* 1848, p. 585; Stainton, Catal. Tin. p. 5 (1849); *id.* Manual, ii. p. 172 (1859).

Lispe, Treitschke, Eur. Sch. ix. 1, p. 204 (1832).

Myelophila, Treitschke, *id.* Suppl. x. p. 174 (1835); Guénee, Micro. p. 85 (1845).

Forewing long, narrow; cell more than two-thirds the length; first subcostal at one-seventh before end of cell, second and third from angle close to end, third bifid, fifth from end; discocellular outwardly oblique and slightly concave; *no upper radial*, lower radial and upper median on a footstalk half beyond the cell; middle median from angle close to end, lower at about one-sixth; submedian straight: hindwing ample, triangular, exterior margin very obliquely convex; cell half the length; two subcostals from a short distance beyond end of cell, upper partly joined to costal; discocellular deeply concave, radial and upper median on a footstalk two-thirds beyond the cell, middle median from end of cell, lower at one-fourth; a submedian and two internal veins. Body moderately slender; antennæ slender, simple, minutely pubescent in front; labial palpi ascending, curved, rising above the vertex, compactly squamous, apex pointed, joints indistinct; maxillary palpi short, slender; legs stout, squamous, spurs unequal.

Type, M. cribrum.

MYELOIS (?) BASIFUSCALIS.

Myelois (?) *basifuscalis*, Walker, Catal. Lep. Het. B. M. xxvii. p. 38 (1863).

"Female. Cinereous. Wings brownish for nearly one-third the length from the base, this hue bounded by a pale undulating partly black-bordered line; exterior line pale, denticulated, partly black-bordered; reniform mark of the forewings small, blackish; two blackish spots on the inner side of the exterior line in the forewings; marginal points black. Palpi porrect, not so long as the breadth of the head, third joint lanceolate, shorter and more slender than the second; antennæ much more than half-length of the body; abdomen elongate, conical, extending a little beyond the hindwings.

"Expanse 7 to 8 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

MYELOIS (?) MARSYUSALIS.

Myelois (?) Marsyusalis, Walker, Catal. Lep. Het B. M. xxvii. p. 37 (1863).

"Male. Brown, much paler beneath. Forewings rounded at the tips; exterior border hardly oblique; middle line testaceous, slightly undulating; submarginal points testaceous. Palpi curved over the vertex, first joint moderately long, second stout, third lanceolate, about half-length of second and much more slender; antennæ stout, minutely pubescent; abdomen extending a little beyond the hindwings; legs stout, spurs very long; fore tibiæ very short.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus PEMPELIA.

Pempelia, Hübner, Verz. bek. Schmett. p. 369 (1825-7); Zeller, Isis, 1839, p. 179; *id.* 1846, p. 766.

Forewing long, narrow, apex obtuse, exterior margin slightly oblique, hardly convex; cell two-thirds the length; first subcostal emitted at one-fourth before end of the cell, second near the end, third bifid; discocellular bent near the ends, radials from the angles; middle median close to end of cell, lower at one-sixth; submedian straight: hindwing long, broad, exterior margin very oblique, convex; costal vein curved upward; cell one-third the length; two subcostals from beyond end of the cell, upper joined to costal from its base to one-third its length; discocellular outwardly oblique, concave, no radial; two upper medians on a footstalk at half beyond the cell, lower median from end of the cell; submedian and two internal veins straight and widely separated. Body moderately slender; labial palpi long, ascending, rising above the head, smoothly squamous, rather stout, third joint short, obtusely pointed; maxillary palpi long in male and with a lengthened slender pencil of fine hairs; maxillary palpi in female short; antennæ in male rather thick, submoniliform, minutely pubescent in front, somewhat twisted at the base and with a short compact tuft in front; legs laxly squamous, tarsi rather stout, not long, spurs long, slender, unequal.

Type, P. ornatella.

PEMPELIA CAUTELLA.

Pempelia cautella, Walker, Catal. Lep. Het. B. M. xxvii. p. 73 (1863).

Forewing cinereous-brown, minutely brown-scaled, with faint traces of a transverse pale band before the middle: hindwing pale cinereous, semihyaline; with a

slender brown marginal line. Body, palpi, and legs cinereous-brown; tarsi darker-brown, with pale bands.

Expanse $\frac{6}{10}$ inch.

Genus CADRA.

Cadra, Walker, Catal. Lep. Het. B. M. xxx. p. 961 (1864).

"Male and female. Wings long, narrow: forewings rounded at the tips; exterior margin nearly straight, hardly oblique. 'Body slender; palpi stout, nearly erect, rising a little higher than the vertex; second joint squamous, third lanceolate, about half-length of the second; maxillary palpi distinct; antennæ smooth, rather stout; abdomen extending beyond the hindwings; legs smooth, rather slender, hind tibiæ with long spurs."

CADRA DEFECTELLA.

Cadra defectella, Walker, Catal. Lep. Het. B. M. xxx. p. 962 (1864).

"Male and female. Cinereous: forewings very minutely speckled; with two indistinct and diffuse pale fawn-coloured bands.

"Expanse $\frac{7}{10}$ inch."

Genus DAPHA.

Dapha, Walker, Catal. Lep. Het. B. M. xxvii. p. 124 (1863).

"Female. Wings rather broad, not long: forewing rectangular at the tip, costa straight, exterior margin slightly convex, hardly oblique. Body stout; palpi porrect, compressed, second joint extending half its length beyond the head, broadly and laxly fringed above, third joint slender, truncate at the tip, half-length of the second; antennæ rather stout, short, simple; legs smooth, rather stout, middle tibiæ slightly dilated and fringed, hind spurs short."

DAPHA VALEUSALIS.

Dapha Valeusalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 125 (1863).

Female. Violaceous-cinereous: forewing crossed by a subbasal, medial, and postmedial duplex brown lines, the two former outwardly curved from the costa and slightly bent inward near the posterior margin, the outer lines denticulated; the middle line internally and the postmedial line externally being slightly black-speckled; the basal, medial, and exterior area suffused with olive-green. Thorax and palpi with brown bands.

Expanse $\frac{6}{10}$ inch.

Genus CABRAGUS.

Male. Forewing narrow; apex pointed, exterior margin slightly oblique; cell

two-thirds the length; first subcostal at one-fourth before end of the cell, second and third close to the end, third bifid, fifth from the end; discocellular oblique, radial from its lower end; two upper medians from end of the cell, lower close to the end; submedian slightly recurved: hindwing moderately long, triangular; cell short, about one-fourth the length; subcostals from end of the cell, both joined to the costal at their base; discocellular outwardly concave; radial and upper median on a footstalk half beyond the cell, middle median from end of the cell, lower about one-third before the end; submedian and internal vein straight. Body moderately stout; abdomen tufted at the tip; thorax laxly squamous; labial palpi long, stout, ascending, recurved outward, coarsely squamous, second joint reaching the vertex, third joint of equal length, broad, pointed at the tip, concave within (like a miniature of a rabbit's ear); maxillary palpi short, furnished with a tuft of long fine hairs, which are inclosed within the cavity of the labial when at rest; antennæ with a lengthened oval spatular dilatation at base of the shaft, which is covered above by an adpressed scaly tuft, the entire shaft finely serrated and ciliated to near the tip; legs rather stout, squamous; hind tibiæ tufted at the tip.

Allied to *Magiria* (Zeller, Stett. Ent. Zeit. 1867, p. 393) and to *Ceratamma* (Butler, P. Z. S. 1880, p. 689).

CABRAGUS AURITIPALPUS (PLATE 184, FIG. 9, ♂).

Male. Forewing purplish-brown, speckled with cinereous scales; crossed by a curved antemedial pale fascia, beyond which is a darker brown costal patch followed by two smaller patches before the apex: hindwing dusky-brown; cilia pale purplish-brown. Thorax purplish-brown; head, labial palpi, and legs dark purplish-brown, cinereous-speckled; tuft of maxillary palpi ochreous; dilated base of antennæ metallic-brown beneath, ochreous above; anal tuft ochreous.

Expanse $\frac{6}{8}$ inch.

Captured at Almirhara, May 6th, 1885, by Mr. F. M. Mackwood.

Genus LACIPEA.

Lacipea, Walker, Catal. Lep. Het. B. M. xxvii. p. 138 (1863).

"Female. Wings rather narrow; fringe broad: forewings slightly rounded at the tips; exterior border hardly oblique. Body rather stout; palpi obliquely ascending, not rising above the vertex, third joint very minute, not so much as one-fourth the length of the second; antennæ stout; thorax smooth; tegulæ long; abdomen extending beyong the hindwings; legs stout, bare; hind femora and hind tibiæ dilated, especially the latter."

LACIPEA MUSCOSELLA.

Lacipea muscosella, Walker, Catal. Lep. Het. B. M. xxvii. p. 138 (1863).

"Female. Brownish. Forewings with a black angular discal mark, which includes a pale testaceous spot in its angle. Thorax and forewings irregularly streaked with testaceous. Abdomen and hindwings, and underside more cinereous.

"Expanse 10 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus MOCA.

Moca, Walker, Catal. Lep. Het. B. M. xxvii. p. 102 (1863).

Forewing slightly elongated, rather broad, rounded at the apex, costa and exterior margin very slightly convex, posterior margin convex near the base; cell two-thirds the length; first subcostal at about two-fifths before end of the cell, second, third, fourth, and fifth, free, equidistant apart; discocellular recurved, radials from near each end; middle median close to end of cell, lower at one-sixth before the end; submedian slightly undulated: hindwing convex externally; cell more than half the length; two subcostals on a footstalk at one-fourth beyond the cell; discocellular angulated, radial from angle near upper end; middle median from near end of cell, lower at one-sixth; submedian and internal vein curved. Body stout; palpi ascending to level of vertex, curved, squamous, second joint rather broad and flattened in front, third joint very small, obtusely pointed; antennæ short, minutely pubescent in front, basal joint stout and slightly tufted in front; legs squamous, short, stout, spurs long, slender, unequal.

MOCA VELUTINA.

Moca velutina, Walker, Catal. Lep. Het. B. M. xxvii. p. 102 (1863).

Fuliginous-brown: forewing with short longitudinal darker-brown pale-bordered streaks, more distinct blackish submarginal streaks, and a black denticulated marginal line; a prominent black streak near end of the cell, and a discocellular lunule. Thorax with pale-bordered brown longitudinal streaks; palpi pale-edged in front; legs and tarsi with pale bands.

Expanse 1 inch.

MOCA LITHOSIOIDES.

Cinereous purplish-brown: forewing with an ochreous-yellow antemedial curved transverse broken band, three equidistant costal patches, some lower discal blotches, and a slender streak above posterior angle; anterior end of the cilia also yellow;

marginal line black: hindwing and abdomen paler cinereous purplish-brown; cilia yellow. Collar, tegulæ, and base of abdomen fringed with yellow; front of head, palpi, and legs ochreous-yellow; tibiæ with a black patch.

Expanse $\frac{9}{10}$ inch.

Genus ARRADE.

Arrade, Walker, Catal. Lep. Het. B. M. xxvii. p. 82 (1863).

Forewing long, narrow; costa straight, tip obtusely pointed, exterior margin oblique, posterior margin fringed at the end, which is excavated in the middle; cell fully two-thirds the length; first subcostal emitted at two-sevenths before end of the cell, second at one-seventh, bifid near its end, fourth and fifth from the end; discocellular extremely slender, almost obsolete, concave, radial from lower end; middle median close to end of cell, lower at one-third; submedian nearly straight: hindwing rather long, narrow; apex obtuse, exterior margin convex; cell fully half the length; two subcostals on a short footstalk beyond the cell; discocellular extremely slender, no radial; two upper medians from end of the cell, lower at one-third; submedian and internal veins straight. Body rather slender, smooth; head hirsute in front; labial palpi obliquely curved, second joint reaching to vertex, with a short fringe above, third joint lanceolate, less than half-length of second; antennæ slender; legs long, slender, smooth, fore tibiæ densely fringed in front, spurs very long, slender, unequal.

ARRADE EREBUSALIS.

Arrade Erebusalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 82 (1863).

Forewing cinereous-brown; with three pale-bordered black-speckled transverse denticulated lines; the first line medial, inwardly oblique; second line discal, bent obtusely outward; third line submarginal, undulated; marginal line black, slender: hindwing pale cinereous-brown. Body, palpi, and legs cinereous-brown.

Expanse $\frac{8}{10}$ inch.

Genus HAMAXIA.

Hamaxia, Walker, Catal. Lep. Het. B. M. xxvii. p. 128 (1863).

Male. Forewing slightly elongated, rather broad, apex acute, costa slightly convex, exterior margin somewhat scalloped, angular in the middle; cell more than half the length, disposed somewhat towards middle of the wing; first subcostal emitted about one-third before end of the cell, second at one-ninth, trifid, fifth from the end; discocellular slightly concave in the middle, radials from near each end; middle median near end of the cell, lower at nearly half before the end; submedian nearly straight, with a short recurved lower slender branch: hindwing broad,

exterior margin convex, slightly scalloped; cell half the length; subcostal well separated from the costal, two branches from end of cell; discocellular outwardly concave, radial from below the middle; two upper medians from end of cell, lower at nearly half before the end; submedian and internal vein straight. Body rather slender; thorax clothed with adpressed spatular scales; head pilose in front; labial palpi long, slender, curved obliquely upward, rising much higher than the vertex, lanceolate, second joint laxly fringed above and beneath, third joint very slender, half-length of second; antennæ very minutely setulose; legs smooth, slender, rather long, tibiæ stout, thickly fringed, spurs very long and slender.

HAMAXIA LIGNULINA.

Hamaxia lignulina, Walker, Catal. Lep. Het. B. M. xxvii. p. 128 (1863).

Very pale brownish-ochreous: forewing slightly speckled with pale-brown scales, which are more numerously clustered from middle of the costa to middle of the exterior margin, and there form an oblique angular fascia; above the fascia is a costal cluster before the apex; a slight brown dot in middle of the cell, and a marginal row of dark-brown points: hindwing slightly speckled with pale-brown scales, and with a marginal row of brown points.

Expanse 1 inch.

Note.—The three last enumerated genera, viz. *Moca*, *Arrade*, and *Hamaxia*, which have been referred to this family by Mr. Walker, are placed here with doubt.

Family GALLERIIDÆ.

Forewing elongate, exterior margin indented, or convex: hindwing above with the base of median vein fringed. Antennæ simple, or minutely ciliated; basal joint generally with a tuft of scales beneath; labial palpi short in male, long and porrected in female; maxillary palpi minute, concealed.

Larva with sixteen legs; dull whitish, with dark spots, and rather bristly. Feeds on wax in beehives and in the nests of wild bees, protected by silken galleries. Pupates within the hives.

Genus MELISSOBLAPTES.

Melissoblaptes, Zeller, Isis, 1848, p. 580; Stainton, Manual, ii. p. 165 (1859).
Lamoria, Walker, Catal. Lep. Het. B. M. xxvii. p. 87 (1863).

Forewing long; costa slightly arched, apex and exterior margin convex, slightly oblique; cell two-thirds the length; first subcostal emitted at one-third before end of the cell, second at one eighth, third from the end, trifid; discocellular extremely

slender, outwardly recurved, upper radial from near its upper end, lower radial and upper median on a footstalk at one-fourth beyond the cell, middle median close to the end, lower at one-third; submedian curved, with a short basal looped branch: hindwing rather long, triangular, apex convex; cell open; subcostals at one-half from the base, upper joined to the costal to nearly half its length; lower median at one-half from the base, middle median at one-third, upper median and the radial on a footstalk half-way beyond; submedian and two internal veins straight. Body rather stout; head with a prominent decumbent tuft; labial palpi porrect, rostriform, lanceolate, squamous, extending half beyond the tuft; third joint half-length of the second; maxillary palpi short, slender; antennæ smooth, stout at the base; legs squamous, spurs slender, unequal.

MELISSOBLAPTES BIPUNCTANUS.

Melia bipunctana, Haworth, MS.; Curtis, Brit. Ent. v. fol. 201 (1828).
Melissoblaptes bipunctanus, Zeller, Isis, 1848, p. 580; Stainton, Manual, ii. p. 165 (1859); Ragonot, Ent. Monthly Mag. 1885, p. 21.
Tinea Pyr. sociella, Hübner, Eur. Schmett. Tin. pl. 4, f. 24, ♀.
Galleria Anella, Zink. Sommer, Germ. Mag. Ent. iv. p. 243.
Lamoria planalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 88 (1863), ♀.
Acrobasis imbella, Walker, *id.* xxx. p. 955 (1864), ♀.

Male. Forewing very pale cinereous ochreous-brown, mottled with minute greyish-white and black scales; with an indistinctly defined black-scaled orbicular and reniform spot, very indistinct angular transverse antemedial and a more distinct curved discal series of pale-bordered blackish points, and a marginal row of dots: hindwing and abdomen pale brownish-white. Thorax, head, palpi, and legs pale cinereous ochreous-brown.

Female. Forewing darker cinereous ochreous-brown; blackish scaled; the transverse series of blackish points more distinct, and the outer veins also black-speckled.

Expanse, ♂ $\frac{8}{10}$ to 1 inch, ♀ 1$\frac{3}{10}$ inch.

Genus RHANGENA.

Forewing elongated, rather broad; costa arched, apex obtuse, exterior margin oblique, posterior margin convex towards the base; cell two-thirds the length; first subcostal about one-third before end of the cell, second at one-sixth, trifid, fifth from the end and touching the third near its base; discocellular bent inward in the middle, radials from angle near each end; middle median close to end of cell, lower at one-third; submedian curved downward from the base: hindwing short, not broader than the forewing; cell nearly two-thirds the length; subcostal joined to the costal to half-length of the cell; two subcostals from end of cell; discocellular

slender, bent in the middle, radial from near lower end; two upper medians from end of the cell, lower at one-third; a straight submedian and internal vein. Body moderately slender; palpi obliquely ascending, reaching above the vertex, slender; antennæ slender, submoniliform, with a few fine short lashes; legs rather slender, squamous, spurs long, unequal.

RHANGENA ROSEIPENNIS (Plate 184, Fig. 12).

Forewing pale purplish-red, darkest along the veins, with a marginal row of blackish points: hindwing brownish-white. Thorax, head, palpi, and forelegs purplish-red; abdomen brownish-white; tip and the tarsi brownish.

Expanse 1 inch.

Family CRAMBIDÆ.

Wings folded round the body when at rest: median vein of hindwing above with a basal fringe. Antennæ simple, finely ciliated, rarely pectinated in the male; labial palpi generally long, porrected, forming a long beak in front of the head, partially covered by the maxillary palpi, sometimes short and ascending.

Larva with sixteen legs; whitish or dull coloured, with large shining spots. Feeds in silken galleries, amongst moss in grassy places, or in the stems of aquatic plants.

Genus LORYMA.

Loryma, Walker, Catal. Lep. Het. B. M. xix. p. 890 (1859).
Tauba, Walker, *id.* xxxv. p. 1767 (1866).

Male. Forewing elongate, narrow, costa arched at the end, apex rounded, exterior margin oblique; cell two-thirds the length; first subcostal emitted at one-fourth before end of the cell, second approximate, third from end, trifid; discocellular slender, concave, upper radial from upper end, lower radial and upper median on a footstalk at one-third beyond the cell; middle median from end of the cell, lower at nearly one-fifth; submedian nearly straight: hindwing rather long, triangular, apex rounded; cell nearly one-third the length at the upper end and nearly two-thirds at lower end; two subcostals from end of the cell, upper joined to costal at the base; discocellular bent very obliquely outward from near its upper end; radial and upper median on a footstalk at one-third beyond the cell; middle median from end of the cell, lower at one-third; submedian and two internal veins widely separated. Body moderately stout, anal segments set with short hairy scales; labial palpi curved upward, second joint pilose beneath and in front, the hairs in front long and projected forward, third joint slender, lanceolate, nearly as long as the second; maxillary

palpi extending to half-length of the labial; antennæ stout, minutely serrated and biciliated, basal joint thick, pointed and very slightly tufted in front; legs rather stout, tibiæ laxly squamous, spurs long, slender, unequal.

Type, L. sentiusalis.

This genus is closely allied to the Australian genus *Gadira* of Walker, which has since been re-named *Cryptomima* by Meyrick.

LORYMA VENOSELLA.

Tauba venosella, Walker, Catal. Lep. Het. B. M. xxxv. p. 1767 (1866), ♂.

Forewing pale ochreous-brown, minutely speckled with black scales; veins cinereous-white; crossed by an inwardly-oblique medial recurved angulated white line, and a curved submarginal line; the lines being bordered by the black scales; followed by a white-bordered slender black marginal line: hindwing cinereous-white, with a slender black marginal line, and broader interciliar line. Body pale ochreous-brown; tegulæ and segments narrowly bordered with cinereous-white; legs speckled with cinereous-white scales.

Expanse $\frac{7}{10}$ inch.

Genus SURATTHA.

Surattha, Walker, Catal. Lep. Het. B. M. xxvii. p. 75 (1863).
Pindicitora, Walker, *id.* xxvii. p. 134 (1863).
Calarina, Walker, *id.* xxxiv. p. 1769 (1866).

Male and female. Forewing narrow, rounded at the tip, costa straight, exterior margin obliquely convex; cell two-thirds the length; first subcostal at one-third before end of the cell, second and third close to the end, third bifid, fifth from the end; discocellular outwardly oblique, slightly concave; upper radial from slight angle near subcostal, lower radial and upper median on a footstalk half beyond end of the cell, middle median from close to the end, lower at nearly one-fifth before the end; submedian nearly straight, and with a very slender lower recurved branch: hindwing ample, apex and exterior margin convex; cell about one-third the length at its upper end and two-thirds at its lower end; costal vein undulated; one subcostal only, which is curved upward from end of the cell and slightly touches the costal; discocellular bent obliquely outward in the middle, radial from upper end near the middle; the middle median from close to end of cell, lower at one-fourth; a submedian and two internal veins. Body moderately stout; abdomen slightly tufted; labial palpi porrect, stout, projecting half beyond the head, laxly pilose, third joint elongate-conical, acute, and about one-fourth the length of second; maxillary palpi about half-length of the labial, laxly pilose at the tip; antennæ in the male

short, broadly bipectinated, setose in female; legs smooth, rather stout, spurs unequal.

Type, S. invectalis.

SURATTHA INVECTALIS.

Surattha invectalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 76 (1863), ♀.
Pindicitora Thysbesalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 135 (1863), ♂ ♀.

Male and female. Pale brownish-ochreous: forewing sparsely black-speckled; with a transverse subbasal brown-speckled band, a slightly undulated medial pale-bordered band, and a postmedial angular denticulated pale band with black-tipt points; the basal and discal area thickly brown-speckled, the latter encircling a white lunate spot at end of the cell; marginal points black; cilia with a brown inner line: hindwing paler; cilia edged with white. Body, palpi, and legs pale brownish-ochreous; thorax brown-speckled; shaft of male antennæ pale brownish-ochreous, the pectinations dark drown; shaft of female antennæ dark brown: palpi brownish at the side; fore and middle legs, and all the tarsi with brown bands.

Expanse, ♂ $\frac{8}{10}$, ♀ $1\frac{1}{10}$ inch.

SURATTHA ZEUXOALIS.

Pindicitora Zeuxoalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 135 (1863).

Female. Purplish-brown: forewing crossed by an inwardly-oblique white line, which extends from the posterior margin to end of the cell, where it is bent outward and ends in a lanceolate streak; a slender waved postmedial line; outer border suffused with cinereous: hindwing with a very slender indistinct discal waved whitish line. Body, palpi, and legs purplish-brown.

Expanse $\frac{6}{10}$ inch.

SURATTHA ANNUSALIS.

Pindicitora Annusalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 136 (1863).

"Male. Cinereous. Forewings speckled with brown; costa convex; tips rounded; exterior border very oblique: hindwings with the interior border broadly fringed. Palpi porrect, brown, cinereous towards the tips, third joint acute, not more than one-third of the length of second; antennæ broadly pectinated; abdomen extending a little beyond the hindwings, apical tuft rather long; anterior legs brown.

" Expanse 8 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

SURATTHA ACREONALIS.

Pindicitora Acreonalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 136 (1863).

"Male and female. Cinereous-brown. Forewings with two more or less diffuse undulating cinereous lines, one in the middle, the other submarginal; reniform mark small, cinereous: hindwings and abdomen pale cinereous. Underside pale cinereous.

"Expanse 9—12 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus LIBUNA.

Bulina,* Walker, Catal. Lep. Het. B. M. xxxv. p. 1767 (1866).

"Wings rather narrow: forewings slightly rounded at the tips, exterior border hardly oblique. Body moderately stout; palpi porrect, stout, lanceolate, slightly pilose, fully as long as the breadth of the head, third joint minute; abdomen extending a little beyond the hindwings; legs rather stout, not pilose, spurs very long."

LIBUNA SOLITELLA.

Bulina solitella, Walker, Catal. Lep. Het. B. M. xxxv. p. 1767 (1866), ♂.

"Male. Pale cinereous: forewings with a very slight straw-coloured tinge; the reniform mark represented by a minute blackish dot, behind which there is another equally minute; both occasionally obsolete. Eyes large. Head and thorax with a very slight straw-coloured tinge.

"Expanse 9 lines."

Hab. Ceylon.

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard.

Genus CRAMBUS.

Crambus, Fabricius, Ent. Syst. Suppl. p. 464 (1798)); Walckenær, Faun. Paris, ii. p. 310 (1802); Latreille, Hist. Nat. Cr. et Ins. iii. p. 476 (1802); *id.* xiv. p. 247 (1805); *id.* Consid. Gen. Cr. et Ins. p. 369 (1810); Leach, Edin. Enc. ix. p. 135 (1815); Lamarck, Hist. Nat. Anim. iii. p. 552 (1816).

Palparia (part), Haworth, Lep. Brit. p. 487 (1812).

Argyroteucha (part), Hübner, Verz. bek. Schmett. p. 364 (1825-7).

Forewing long, narrow, costa convex at the tip, apex produced to a point, falcate, exterior margin oblique, convex hindward; cell fully two-thirds the length,

* Used by Lesson in 1831 for a genus of Mollusca.

first subcostal emitted about one-fifth before end of cell, second near the end, third trifid; discocellular extremely slender, radials from near the upper end and at lower end; middle median at one-seventh, lower at two-sevenths, before end of cell; submedian straight: hindwing long, broad, triangular, apex convex, cell open; subcostals at one-third from base of the wing, second joined to costal to half its length; base of median above, fringed; lower median at nearly half from base of wing, middle median at three-fourths, upper median and radial on a footstalk half-way beyond the middle median; a straight submedian and two slightly curved internal veins. Body slender; labial palpi long, porrect, pointed; maxillary palpi short, triangular, apex with a dilated tuft; antennæ submoniliform, pubescent in front; legs smooth, spurs stout, nearly equal.

Type, C. pascuellus.

CRAMBUS HAPALISCUS (Plate 184, Fig. 6).

Crambus hapaliscus, Zeller, Lep. Micro. Caffr. Kongl. Vet. Akad. Handl. 1852, p. 71; Zeller, Monog. Chilo. et Cramb. p. 17 (1863).

Crambus concinnellus, Walker, Catal. Lep. Het. B. M. xxvii. p. 165 (1863); Meyrick, Proc. Linn. Soc. New S. Wales, iii. p. 182 (1878).

Forewing pale violet-brown, palest along the posterior border; with a broad longitudinal silvery-white band extending below the costa from the base to apex, and which is crossed before the apex by four outwardly-oblique slender cinereous-violet convergent lines, one of which angularly descends to the posterior margin; the outer discal and marginal area with slight black short longitudinal streaks; cilia with a whitish inner line, which is most prominent at the apical end: hindwing semihyaline white, with a brownish marginal line. Body brownish-white; thorax and labial palpi brown at the sides; forelegs entirely brown; bands on tarsi also brown; antennæ brown.

Expanse $\frac{8}{10}$ inch.

CRAMBUS ERMINEUS (Plate 184, Fig. 7).

Silky-white: forewing crossed by a slender brown outwardly-curved postmedial line, which terminates at its posterior end in a large brown spot, followed by a sub-marginal undulated line, between which and the exterior margin are some short longitudinal golden-yellow streaks, one on each vein; between the streaks on the upper and middle medians is a black spot; a short black slender streak at the apical end of the exterior margin; costal edge at the base also brown; cilia edged with brown: hindwing pure white. Antennæ, palpi at the side, and forelegs brown.

Expanse $\frac{5}{10}$ inch.

Genus ANCYLOLOMIA.

Ancylolomia, Hübner, Verz. bek. Schmett. p. 363 (1825-7); Zeller, Monog. Chilo. et Cramb. p. 9 (1863).

Jartheza, Walker, Catal. Lep. Het. B. M. xxvii. p. 183 (1863).

Male. Forewing long, narrow; costa straight, apex obtusely produced, exterior margin concave below the apex and convex hindward; cell very long, nearly three-fourths the length; first subcostal emitted at one-fourth before end of the cell, second near the end, third trifid; discocellular extremely slender, bent near the ends, radials from the angles; two upper medians from end of cell, lower at one-fourth before the end; submedian straight, with a short recurved lower branch: hindwing long, broad, apex produced, exterior margin very oblique, convex in middle; subcostal free from the costal; cell one-third the length at its upper end and two-thirds at its lower end; first branch of subcostal emitted before end of the cell, curving upward and slightly touching the costal; upper end of the cell bent obliquely downward, the second subcostal from its end; discocellular very oblique and prolonged outward; radial and upper median from lower end of the cell; middle median very close to the end, lower fully half before the end, base of median fringed above; submedian and two internal veins almost straight. Body slender, abdomen rather long; labial palpi very long, porrect, slightly curved downward, pilose above, third joint attenuated, tip acute; maxillary palpi short, ascending, laxly pilose at tip; antennæ long, broadly pectinated on the inner side only to near the tip, the branches finely ciliated; legs rather long, squamous, spurs short, equal.

Type, A. palpella.

ANCYLOLOMIA TAPROBANENSIS (PLATE 184, FIG. 2, 2*a* ♂ ♀).

Ancylolomia taprobanensis, Zeller, Monogr. Chilo. et Cramb. p. 9 (1863); *id.* Horæ. Soc. Ent. Ross. 1877, p. 25, pl. 1, fig. 8.

Male. Forewing pale brownish-ochreous, the medial area suffused with golden-yellow; all the veins except the costal lined with black speckles, and between the veins is a metallic silver-specked grey line; bordering the exterior margin is a denticulated golden line, a dark silvery-grey line, and a row of marginal points, followed by a straight silvery-grey interciliar line: hindwing cinereous-ochreous; cilia pale yellow. Body, palpi, and forelegs brownish-ochreous; fore tarsi with pale bands; middle and hindlegs paler ochreous. Female. Paler: forewing with the medial area also of a paler golden-yellow; the veins black-speckled, and with intervening silvery-grey lines; marginal markings as in the male.

Expanse, ♂ 1, ♀ $1\frac{1}{4}$ inch.

ANCYLOLOMIA ARGENTATA (Plate 184, Fig. 3, ♂).

Male. Forewing silvery cinereous-white; the veins within the discal area golden-yellow and lined with black dots; the exterior border with a transverse denticulated golden-yellow line, a broader silvery-grey line, a row of blackish spots, and a recurved marginal line: hindwing darker cinereous-white; cilia pure white. Thorax, head, palpi and forelegs pale-ochreous; abdomen silvery cinereous-white.

Expanse $\frac{7}{10}$ to $\frac{8}{10}$ inch.

ANCYLOLOMIA BASISTRIGA (Plate 184, Fig. 1, ♀).

Male and female. Forewing glossy pale purplish cuprescent-brown; the costal border and a more prominent abbreviated streak from base below the cell ænescent-white; the veins externally lined with silvery-grey, and their interspaces with blackish scales; the black scales being more numerous below the basal streak; marginal row of spots black: hindwing purplish-cinereous; cilia white. Thorax, head, palpi, antennæ, and forelegs brown, speckled with ænescent scales; sides of thorax and tegulæ ænescent-yellow; abdomen pale purplish-cinereous; tarsi with pale bands.

Expanse, ♂ $1\frac{5}{10}$, ♀ $1\frac{7}{10}$ inch.

"Neuera Eliza, May 21st, 1885." (*Mackwood.*)

Genus CULLADIA.

Araxes,* Walker, Catal. Lep. Het. B. M. xxvii. p. 192 (1863).

Wings small: forewing narrow, apex acute, costa straight, exterior margin slightly oblique; cell fully two-thirds the length; first subcostal at one-fourth before end of the cell, second free, third from angle before the end, bifid, fifth from the end; discocellular concave, slender; radial and upper median on a footstalk half beyond the cell, middle median from the end, lower at one-fifth; submedian straight: hindwing rather narrow, apex convex; cell open; two subcostals at one-third the length of the wing, upper joined to costal for half its length; radial and upper median on a footstalk at half-length beyond base of middle median, lower median at half the length of cell; a submedian and two internal veins. Body slender; labial palpi porrect, long, second joint extending more than half beyond the head, slightly pilose at the tip above, third joint lanceolate, acute at the tip; maxillary palpi extending to end of second joint of labial, dilated with fine scales at the tip; antennæ stout; legs short, smooth, spurs equal.

Type, C. admigratella.

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* Used by Stephens in 1834 for a genus of Lepidoptera.

CULLADIA ADMIGRATELLA.

Araxes admigratella, Walker, Catal. Lep. Het. B. M. xxvii. p. 192 (1863).

Cinereous-white : forewing partly cinereous-brown along the costal and posterior borders; crossed by a white-bordered black-pointed denticulated discal line, which is acutely bent inward from the upper median and again outward from the submedian, followed by a recurved submarginal slender black denticulated line, and a slender straight marginal line: hindwing with brownish veins, and a slender marginal line. Palpi brown-speckled; forelegs brown above, tarsi with brown bands.

Expanse $\frac{5}{10}$ inch.

CULLADIA CÆSELLA.

Araxes Cæsella, Walker, Catal. Lep. Het. B. M. xxvii. p. 193 (1863).

Forewing ochreous-white, sparsely brown-speckled; crossed by an indistinct angulated discal brown line, on which is a darker brown dot below end of the cell, followed by an angulated submarginal line, and a marginal row of black dots: hindwing pure white. Body ochreous-white; labial palpi, base of maxillary palpi, and forelegs ochreous-brown; tip of maxillary white.

Expanse $\frac{5}{12}$ inch.

CULLADIA FAMULELLA.

Araxes famulella, Walker, Catal. Lep. Het. B. M. xxxv. p. 1765 (1866).

Forewing pale ochreous-brown, crossed by a very indistinct brown angulated discal line, with a prominent blackish spot below end of the cell, followed by a pale-bordered slender brown angulated submarginal line, and a marginal row of black points: hindwing brownish-white. Body pale ochreous-brown.

Expanse $\frac{6}{12}$ inch.

Genus CHILO.

Chilo, Zinken-Sommer, Germar's Mag. Ent. ii. p. 33 (1817); Stephens, Catal. ii. p. 221 (1829); Treitschke, Eur. Sch. viii. p. 293 (1830); Stephens, Illust. Haust. iv. p. 333 (1834); Zeller, Isis, 1839, p. 169; Monog. Chilo. et Cramb. p. 6 (1863); Guénee, Micro. p. 95 (1845); Stainton, Manual, ii. p. 184 (1859).

Palparia (part), Haworth, Lep. Brit. p. 483 (1812).

Topeutis (part), Hübner, Verz. Bek. Schmett. p. 336 (1825-7).

Male. Forewing elongated, lanceolate, apex acute; cell two-thirds the length; first subcostal recurved upwards from one-third before end of the cell, second at one-ninth, second and third equidistant, third bifid, fifth from the end; discocellular concave in the middle, bent near each end, radials from the angles; middle median about one-ninth before end of cell, lower at one-third; submedian straight: hindwing ample, apex produced, exterior margin convex in the middle; cell nearly one-third the length at its upper end and nearly two-thirds at its lower end; two subcostals

from the end, upper joined to costal for a short distance beyond its base; discocellular bent obliquely inward to near half its length, the lower half longest and bent obliquely outward, radial from extreme lower end; middle median close to end of cell, lower at nearly one-third; submedian and two internal veins slightly recurved; base of median above, fringed. Body slender, abdomen extending about half beyond hindwings, apex pointed; labial palpi long, porrect, clothed with lax hairy scales; maxillary palpi oblique, large, densely clothed at the tip with lax hairy scales; antennæ stout, coarsely serrated, minutely pubescent in front; legs squamous, spurs rather stout, nearly equal. Female. Wings longer: forewing prolonged and acute at the apex; antennæ slender.

Type, C. phragmatellus.

CHILO DODATELLUS.

Chilo dodatellus, Walker, Catal. Lep. Het. B. M. xxx. p. 967 (1864), ♂.
Chilo aditellus, Walker, *id.* p. 967, ♀.

Forewing bright ochreous-yellow, speckled with ochreous-red scales, which are darker and confluent within the cell, and there form a longitudinal fascia; a darker spot at the upper and lower end of the fascia; an inwardly-oblique discal ochreous-red denticulated line, followed by a marginal row of minute red points: hindwing whitish. Thorax, head, palpi, fore and middle femora bright ochreous-yellow; abdomen and hindlegs ochreous-white; fore tibiæ above, middle tibiæ and tarsi, and hind tarsi ochreous-brown.

Expanse, ♂ $\frac{9}{10}$, ♀ $1\frac{3}{10}$ to $1\frac{5}{10}$ inch.

CHILO DESISTALIS (Plate 184, Fig. 10).

Crambus desistalis, Walker, Catal. Lep. Het. B. M. xxvii. p. 165 (1863).

Forewing very pale brownish-ochreous; very sparsely speckled with longitudinally disposed brown scales, of which those within and beyond the cell are more numerous and there form a slight longitudinal abbreviated fascia; marginal points black, minute: hindwing pale brownish-cinereous. Thorax, head, and palpi very pale brownish-ochreous; abdomen brownish-cinereous; legs pale brown.

Expanse $1\frac{1}{10}$ to $1\frac{7}{10}$ inch.

"Captured at Holnicot, March." (*Mackwood.*)

Genus SCHŒNOBIUS.

Schœnobius, Duponchel, Catal. Lep. Eur. p. 312 (1844); Guénee, Micro. p. 95 (1845); Zeller, Monog. Chilo. et Cramb. p. 3 (1863).
Chilo (part), Zinken-Sommer, Guérin's Mag. Ent. ii. p. 33 (1817); Treitschke; Stephens.
Palparia (part), Haworth, Lep. Brit. p. 482.
Erioproctus, Zeller, Isis, 1839, p. 169

Male. Differs from *Chilo*: forewing with the apex obtuse; the first subcostal

emitted at nearly one-third before end of the cell, straight; lower median at one-fourth: hindwing narrower; apex and exterior margin convex, abdomen tufted at apex; labial palpi more compactly clothed, smoother, the third joint stouter and almost fusiform; antennæ not so stout, and distinctly biciliated, with fine short lashes; legs conspicuously longer, smoother, slender.

Type, S. gigantellus.

SCHŒNOBIUS BIPUNCTIFERA (Plate 184, Fig. 13).

Tipanæa bipunctifera, Walker, Catal. Lep. Het. B. M. xxviii. p. 523 (1863).
Schœnobius punctellus, Zeller, Monogr. Chilo. et Cramb. p. 4 (1863).
Chilo gratiosellus, Walker, Catal. Lep. Het. B. M. xxx. p. 967 (1864).

Forewing ochreous-yellow; with a black spot at lower end of the cell: hindwing ochreous-white. Thorax and legs pale ochreous-yellow; abdomen and anal tuft and palpi ochreous-white; tarsi with brownish bands.

Expanse 1 to $1\frac{1}{4}$ inch.

Genus CATAGELA.

Catagela, Walker, Catal. Lep. Het. B. M. xxvii. p. 191 (1863).

Male. Forewing narrow, lanceolate; cell long, extending three-fifths the length; first subcostal emitted at nearly one-third before end of the cell, second and third near the end, well separated, third bifid, fifth from the end; discocellular concave, radials from close to each end; middle median from angle near end of cell, lower at nearly one-third; submedian straight: hindwing very narrow, long, exterior margin and anal angle convex; cell long, more than half the length; costal recurved; two subcostals from end of the cell, upper basally joined to the costal; discocellular outwardly oblique, very concave, radial from lower end; middle median near end of cell, lower at one third; a submedian and two internal veins. Body slender; labial palpi porrect, very long, second joint with a short thick lax fringe in front and beneath, third joint lanceolate, fully half-length of the second; maxillary palpi stout, short, pointed; antennæ stout, thickly setaceous, pubescent; legs slender, long, hindlegs very long, spurs slender, long, unequal.

CATAGELA ADJURELLA.

Catagela adjurella, Walker, Catal. Lep. Het. B. M. xxvii. p. 191 (1863).

Forewing pale dull brownish-ochreous, thickly speckled with ochreous-brown, the speckles forming diffused brown ill-defined streaks between the veins and an oblique fascia across the disc: hindwing whitish. Head, thorax, antennæ, and palpi, fore and middle legs brownish-ochreous; abdomen and hind legs cinereous-white.

Expanse $\frac{6}{8}$ inch.

CATAGELA ADMOTELLA.

Catagela admotella, Walker, Catal. Lep. Het. B. M. xxvii. p. 192 (1863).
Schœnobius minutellus, Zeller, Monogr. Chilo. et Cramb. p. 6 (1863).

Forewing very pale brownish-ochreous, sparsely speckled with minute brown scales; with three minute black equidistant spots below the cell, and a more prominent spot at lower end of the cell; an indistinct oblique discal brown-speckled fascia, and a marginal row of minute black points; cilia whitish: hindwing whitish-ochreous. Body, palpi, and legs very pale brownish-ochreous.

Expanse $\frac{7}{10}$ inch.

Genus PELENA.

Forewing rather broad, elongate, apex acute, exterior margin slightly oblique, posterior margin convex towards the base; cell more than half the length; first subcostal at one-sixth before end of the cell, second close to the end, trifid, fifth from the end; discocellular outwardly oblique, slightly concave at upper end, radials from upper and lower end; middle median close to end of the cell, lower about one-fourth; submedian straight: hindwing short, narrow, apex very convex; cell nearly half the length; two subcostals from the end, upper joined to the costal for a short distance beyond its end; discocellular concave, outwardly oblique, radial from the lower end; two upper medians from end of cell, lower about one-third; a straight submedian and two internal veins. Body stout; labial palpi slender, curved upward, reaching the vertex, squamous, third joint one-third the length of second; maxillary palpi distinct, small; antennæ thick, minutely pubescent in front; legs rather stout, smooth.

PELENA UNICOLOR (Plate 184, Fig. 16).

Brownish-ochreous. Wings without markings: hindwing paler than the forewing. Body, palpi, and legs brownish-ochreous.

Expanse $1\frac{1}{10}$ inch.

Genus PANALIPA.

Araxes (sect. 3), Walker, Catal. Lep. Het. B. M. xxvii. p. 193.

Wings small. Forewing elongate, rather broad, apex acute, exterior margin oblique, straight; cell about three-fifths the length; first subcostal about one-fourth before end of the cell, short, anastomosed to the costal close to end; second and third near end of cell, third bifid, fifth from the end; discocellular slender, concave, radials from the upper and lower end; middle and lower median approximate, about one-fourth before end of the cell; submedian straight: hindwing long, rather narrow, apex convex; cell half the length; subcostals from end of the cell, upper partly joined to the costal; discocellular bent inward before the middle, radial from

lower end; middle median close to end of cell, lower at one-third; submedian and internal veins straight. Body slender; labial palpi long, porrect, second joint slightly pilose above, third joint long and pointed; maxillary palpi short, ascending; antennæ short, thick, pubescent in front; legs slender, long, spurs long, unequal.

PANALIPA IMMERITALIS.

Dosara immeritalis, Walker, Catal. Lep. Het. B. M. xix. p. 830 (1859).
Araxes decursella, Walker, Catal. Lep. Het. B. M. xxvii. p. 194 (1863).

Forewing yellowish-ochreous, without any markings: hindwing ochreous-white. Body, head, palpi, and legs yellowish-ochreous; forelegs brownish above.

Expanse $\frac{1}{2}$ inch.

Genus SCIRPOPHAGA.

Scirpophaga, Treitschke, Eur. Schmett. ix. p. 55 (1832); Zeller, Isis, 1839, p. 170; *id.* Monogr. Chilo. et Cramb. p. 1 (1863).

Male. Forewing very long, lanceolate; cell long, more than two-thirds the length; first subcostal at one-third before end of the cell, straight, second and third near the end, approximate, third bifid, fifth from the end; discocellular bent near the ends and acutely inward in the middle; the middle median at one-ninth before end of cell, lower at one-third; submedian straight: hindwing narrow, exterior margin very oblique, convex; cell more than half the length; first subcostal emitted before end of the cell and slightly touching the costal near its end, second from end of cell; discocellular bent obliquely inward before the middle, radial from slight angle near lower end; middle median at one-seventh, lower at nearly half; a submedian and two internal veins. Body long, abdomen extending half beyond hindwings; anal tuft prominent in female; thorax laxly clothed; antennæ biciliated, the lashes rather long; labial palpi rather decumbent, pointed at the tip, laxly clothed; maxillary palpi distinct, dilated with lax scales at the tip; legs long, spurs unequal. Female. Wings longer; apex of forewings more acute; palpi shorter; antennæ setaceous; abdomen with a broad anal tuft.

Type, S. prælata.

SCIRPOPHAGA AURIFLUA.

Scirpophaga auriflua, Zeller, Monogr. Chilo. et Cramb. p. 2 (1863).

Silky-white. Wings without any markings. Body white; abdomen with broad cinereous-grey bands above and beneath, anal tuft luteous; palpi and forelegs with cinereous-grey bands.

Expanse $1\frac{4}{10}$ inch.

Genus APURIMA.

Apurima, Walker, Catal. Lep. Het. B. M. xxvii. p. 194 (1863).

Male. Differs from *Scirpophaga* in the forewing being more acute at the apex, exterior margin very oblique, the first subcostal emitted at one-third before end of the cell and partly joined to the costal near its end: hindwing rather long, narrow, exterior margin and anal angle very oblique; cell about half the length, broader; subcostals emitted from a footstalk at a short distance beyond end of the cell, the first partly joined to costal close to the base. Labial palpi very much longer, porrect, laxly pilose; maxillary palpi also longer and laxly pilose; antennæ slender, very minutely serrated and pubescent in front.

APURIMA XANTHOGASTRELLA (Plate 184, Fig. 14, ♂).

Apurima xanthogastrella, Walker, Catal. Lep. Het. B. M. xxvii. p. 194 (1863), ♂.

Silky-white. Wings without any markings. Abdomen white, with a bright luteous anal tuft; tarsi with pale cinereous-brown bands.

Expanse $1\frac{2}{10}$ inch.

APURIMA COSTALIS (Plate 184, Fig. 15, ♂).

Male. Wings shorter and of a duller silky-white colour than in *A. xanthogastrella*. Both the forewings and hindwings with the costal edge distinctly fuliginous-brown. Under side of forewing entirely fuliginous-brown. Palpi at the side, pectus, forelegs in front, and tarsi fuliginous-brown.

Expanse $1\frac{1}{10}$ inch.

Genus PATISSA.

Male. Forewing elongate, rather broad; costa arched at the base, apex pointed, exterior margin oblique, straight, posterior angle convex; cell two-thirds the length; first subcostal emitted at one-fourth before end of the cell, joined to the costal before reaching above end of the cell; second from near end of the cell, trifid, fifth from the end; discocellular extremely slender, slightly concave in the middle, bent near the ends, radials from the angles; middle median at one-eighth before end of cell, lower at one-third; submedian straight: hindwing rather long, narrow, apex obtusely pointed; costal vein curved and tumid at the base; subcostal free from the costal at its base, two subcostal branches from end of cell, upper partly joined to the costal; discocellular bent acutely inward in the middle, and emitting a slender veinlet within the cell, radial from slight angle near lower end; middle median at one-sixth before end of cell, lower at fully one-third; a submedian and two straight internal veins. Body rather slender, abdomen slightly tufted at the sides and at apex, extending beyond hindwings; labial palpi obliquely ascending, recurved, reaching to level of the vertex, uniformly hirsute; maxillary palpi reaching to

vertex, pilose; antennæ rather stout, serrated and finely ciliated, shaft scabrous; legs slender, smooth, rather long, spurs long, unequal.

PATISSA LACTEALIS (PLATE 184, FIG. 11.)

Metasia lactealis, Felder et Rogenh. Nov. Voy. Lep. iv. pl. 137, fig. 38 (1875).

Male and Female. White: forewing with a transverse indistinct ochreous-brown speckled antemedial narrow band, which is bent outward within the cell, followed by an inwardly-oblique similar discal, and a submarginal band; some ochreous-brown speckles also at end of the cell; base of the costa edged with brown: hindwing with a few ochreous-brown speckles at and above the anal angle. Body, head, and maxillary palpi white; labial palpi and forelegs above ochreous-brown.

Expanse $\frac{9}{10}$ inch.

Genus RAMILA.

Ramila, Moore, Proc. Zool. Soc. 1867, p. 667.

Forewing elongate, triangular; costa nearly straight, apex pointed, slightly falcate in the female, exterior margin oblique, straight, posterior margin slightly convex towards the base; cell two-thirds the length; first subcostal at nearly half before end of the cell, very short, anastomosed to the costal, second at one eighth, third from end of the cell, trifid; discocellular deeply bent in the middle, radials from slight angles near each end; middle median at one-sixth before end of cell, lower at two-fifths; submedian nearly straight: hindwing short, somewhat quadrate; apex obtuse, exterior margin oblique, straight to lower median, anal angle truncate; cell one-third the length; subcostals on a footstalk a short distance beyond the cell, upper slightly joined to costal near the base; discocellular outwardly oblique, bent deeply before the middle, radial close to lower end; middle median at one-fifth, lower at one-third; submedian and internal veins straight. Body moderately stout, abdomen long; head prominent, large, conical in front; labial palpi porrect, projecting half beyond the head, laxly squamous, apex pointed; maxillary palpi long, extending to near end of labial, pilose at the tip; legs moderately stout, squamous, long, spurs slender; antennæ minutely serrated and pubescent in front.

Type, R. marginella.

RAMILA ACCIUSALIS (PLATE 184, FIG. 5).

Margaronia Acciusalis, Walker, Catal. Lep. Het. B. M. xix p. 977 (1859).

Pure white, silky. Both wings crossed by an ochreous-red curved slender antemedial line, an undulated postmedial line, and a black-pointed marginal line; cilia with a broad ochreous-red inner band traversed by a slender black line, this band ending at the lower median vein, below which the cilia is pure white: forewing also with an

ochreous-red costal band and a lunule at end of the cell. Front of head, palpi, and forelegs ochreous-red; fore tarsi with white bands.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Family ENNOMIDÆ.

Wings with the exterior margins generally more or less angulated or notched. Antennæ of male generally bipectinated, with the branches ciliated, in some genera in the female also; palpi squamous-hirsute, rarely very long, straight or slightly ascending; legs moderately long, hind tibiæ often thickened.

Larva with ten legs, looped; in some with twelve or fourteen legs, the additional legs rarely used in walking; elongated, twig-like; often with lateral projections or dorsal prominences. Lives uncovered on trees and shrubs. Pupa enclosed between leaves, or in the earth.

Genus ANGERONA.

Angerona, Duponchel, Lep. Fr. iv. p. 181; Stephens, Illust. Haust. iii. p. 172 (1831); Guénee, Phal. i. p. 114 (1857); Stainton, Manual, ii. p. 10 (1859); Walker, Catal. Lep. Het. B. M. xx. p. 141 (1860).

Crocota (part), Hübner, Verz. bek. Schmett. p. 295.

Ennomos (part), Treitschke, Schmett. Eur. vi. p. 41.

Male. Forewing somewhat long, rather narrow, apex acute, exterior margin slightly convex, hardly oblique, posterior margin almost straight; cell more than half the length, wide at the end; costal vein forked near its end; first subcostal emitted at one-fifth before end of the cell, second at one-tenth, trifid, slightly touching the first above base of the fourth; fifth from end of the cell; discocellular concave, radial from the middle; the middle median from angle near end of cell, lower about one-third; submedian straight: hindwing somewhat long, exterior margin very convex, scalloped; cell about half the length; subcostal vein bent near its base, first branch before end of the cell; discocellular outwardly oblique, concave; middle median near end of the cell, lower at one third. Body slender; antennæ bipectinated, the branches ciliated; palpi slender; legs long, hind tibiæ incrassated, spurs short, stout.

Type, A. prunaria.

ANGERONA CESSARIA (Plate 185, f. 7. 7a. ♂ ♀).

Boarmia cessaria, Walker, Catal. Lep. Het. B. M. xxi. p. 383 (1860), ♂.

Angeronia præclararia, Walker, Catal. Lep. Het. B. M. xxvi. p. 1499 (1862), ♀.

Testaceous; mostly covered with irregular, transverse, short, brown, confluent strigæ, which are more thinly dispersed along the costal border and basal area of

the male, and thickest and darkest on the exterior border: forewing crossed by a blackish, denticulated, antemedial, and a postmedial line, and an ill-defined brown medial fascia; a submarginal row of pale centred black points, the lowest one being most prominent: hindwing with a similar medial fascia, discal denticulated line, and submarginal row of pale testaceous points, the anal and apical angle also with some testaceous streaks.

Expanse $1\frac{5}{10}$ to $1\frac{7}{10}$ inch.

Genus SCARDAMIA.

Scardamia, Guénee, Phal. i. p. 89 (1857).
Laginia, Walker, Catal. Lep. Het. B. M. xx. p. 245 (1860).

Forewing rather narrow, elongated; apex hardly acute, exterior margin slightly oblique; cell rather more than half the length; costal vein forked near the end; first subcostal at two-fifths before end of the cell, second close to first, trifid, fifth from the end; discocellular outwardly-oblique, slender, radial from the middle; the middle median close to end of cell, lower about one-third: hindwing short, exterior margin convex; cell fully half the length; costal and subcostal curved upward at the base; first subcostal at one-fourth; discocellular outwardly oblique; the middle median close to end of cell, lower at nearly half. Body moderately stout; frontal tuft smooth, broad; antennæ in male broadly bipectinated to near the tip, the branches ciliated; palpi obliquely ascending, rising a little above the vertex, smoothly squamous, second joint long, third very minute; legs long, smooth, slender; spurs rather long slender.

SCARDAMIA METALLARIA (Plate 185, Fig. 2, ♂).

Scardamia metallaria, Guénee, Phal. i. p. 89 (1857); Walker, Catal. Lep. Het. B. M. xx. p. 112.
Laginia bractearia, Walker, Catal. Lep. Het. B. M. xx. p. 245 (1860).
Scardamia taprobanes, Felder and Rogenh. Nov. Reise, Lep. v. pl. 122, f. 2 (1875).

Reddish-ochreous; the basal two-thirds with short transverse darker strigæ. Both wings with a transverse narrow medial, discal, and a marginal metallic silvery-black line, the medial line on the forewing being continued along the costa to the base; the outer border traversed by a greyish fascia, marked with short, slender, black strigæ; a small brown spot at end of each cell; costal border of forewing greyish-ochreous. Thorax with a silvery collar; abdomen with whitish bands; antennæ brown, shaft white edged; body, palpi, and legs reddish-ochreous.

Expanse, ♂ $\frac{9}{10}$, ♀ $1\frac{1}{10}$ inch.

Genus LAGYRA.

Lagyra, Walker, Catal. Lep. Het. B. M. xx. p. 58 (1860).
Chizala, Walker, Catal. Lep. Het. B. M. xx. p. 264 (1860).

Male. Forewing elongate, triangular, apex produced and falcated; cell more

than half the length, broad at the end; first subcostal at one-sixth before end of the cell, bifid near the base, third close to end of cell, trifid, the third and fourth equidistant from the fifth; discocellular inwardly oblique, bent inward at one-third from its upper end, and outward at two-thirds, radial from the upper angle; middle median near end of cell, lower at one-half: hindwing short, broad, quadrate; exterior margin angular in the middle; cell long, about two-thirds the length, wide at the base; the costal and subcostal much curved upward at the base; first subcostal near end of cell; discocellular concave; middle median near end of cell, lower at one-half. Body moderately slender, abdomen not extending beyond hindwings; antennæ broadly bipectinated and ciliated to one-third of the tip; palpi short, stout, projecting in front, third joint very minute, conical; legs moderately long, rather stout, laxly clothed with hairy scales, which are rather long beneath; spurs moderately long and stout. Female: forewing excavated below the apex, sinuous hindward; hindwing slightly sinuous.

Type, L. talaca.

This genus is allied to *Hyposidra*, Guènee.

LAGYRA TALACA (Plate 185, Fig. 1, 1*a* ♂ ♀, 1*b* larva).

Lagyra Talaca, Walker, Catal. Lep. Het. B. M. xx. p. 59 (1860). ♀; *id.* xxvi. p. 1484, ♀.
Chizala deceptatura, Walker, Catal. Lep. Het. B. M. xx. p. 264 (1860), ♂.
Lagyra bombycaria, Walker, *id.* xxxv. p. 1539 (1866), ♂.
Chollida falcata, Walker, Ms. B. M. Coll., ♂.

Male. Glaucescent cinereous-brown, very sparsely speckled with darker brown: forewing with an indistinctly defined, narrow, angulated, antemedial darker brown-bordered fascia, and a similar broader medial fascia: hindwing with a similar coloured curved antemedial, and a narrow angulated medial fascia, the two corresponding with the medial fascia of the forewing; the cilia dark-brown. Palpi and antennæ dark-brown. Female glaucescent cinereous-brown, some being tinged with ochreous; both wings with similar darker fasciæ.

Expanse, ♂ $1\frac{6}{10}$, ♀ $2\frac{2}{10}$ inch.

Larva with ten legs; looped; pinkish olivaceous-green, minutely black speckled; with a black lateral spot on the fifth and seventh segments. Pupa olivaceous-green and reddish.

"Feeds on *Jambona*, *Combretum*, and *Ficus parasiticus*" (*Thwaites*).

Genus HYPERYTHRA.

Hyperythra, Guénee, Phal. i. p. 99 (1857); Walker, Catal. Lep. Het. B. M. xx. p. 124 (1860).

Male. Forewing somewhat lanceolate, apex acute; cell less than half the length, first subcostal emitted at one-fifth, second about one-tenth, quadrifid, the sixth from end of cell; discocellular outwardly oblique, slightly concave, radial from the middle;

the middle median near end of cell, lower at two-fifths: hindwing rather short, broad, exterior margin slightly dentated; cell very short, about one-fourth the length; on the upperside is a glandular depression near upper base of the cell, from which projects a long fascicle of black-tipt hairs; costal vein bent downward above end of the cell; first subcostal about one-third before end of cell; discocellular outwardly-oblique; two upper medians from end of cell, lower at nearly one-third. Body slender, short; antennæ long, bipectinated to within one-third the tip; frontal tuft depressed, projecting; palpi somewhat decumbent, second joint stout, laxly squamous, third joint smooth, cylindrical and pointed; legs long, slender, hind tibiæ slender, spurs long, slender.

Type, H. lutea (*limbolaria*, Guén.).

HYPERYTHRA LUTEA (Plate 185, Fig. 6, 6*a* ♂ ♀).

Phalæna Geometra lutea, Cramer, Pap. Exot. iv. 157. pl. 370. f. C. D (1781), ♀.
Hyperythra lutea, Walker, Catal. Lep. Het. B. M. xx. p. 127 (1860).
Phal. Geom. flavaria, Fabricius, Mant. Ent. ii. p. 187 (1787); Ent. Syst. iii. 2. p. 169 (1794).
Hyperythra penicillaria, Guénee, Phal, i. p. 101 (1857), ♂.
Hyperythra limbolaria, Guénee, Phal. i. p. 101. pl. 3. f. 3, 4 (1857) ♀.
Aspilates susceptaria, Walker, Catal. Lep. Het. B. M. xxxv. p. 1664 (1866).

Male. Yellowish-ochreous, numerously covered, except on base of the hindwing, with partly confluent ferruginous-brown strigæ, which form more or less defined darker transverse antemedial and postmedial fasciæ, the latter sometimes broken and apparent only as patches on the disc and towards the apex. On the upperside of the hindwing is a fascicle of long black-tipt hairs, arising from a depression near base of the cell. Antennæ brown, shaft purple-brown and white speckled; palpi purplish-brown and white speckled; forelegs purplish-brown, with the base of each joint white speckled.

Female. Ochreous-yellow, sparsely speckled with minute ochreous-brown scales; crossed by a more or less defined antemedial, medial, and a postmedial brown-speckled line, the latter with outer-bordered ill-defined brown patches, the darkest of which is near apex of the hindwing.

Expanse ♂ $1\frac{4}{10}$ ♀ $1\frac{7}{10}$ inch.

Genus FASCELLINA.

Fascellina, Walker, Catal. Lep. Het. B. M. xx. p. 215 (1860).

Forewing elongate, rather narrow; costa arched towards the end, apex acute, exterior margin slightly oblique and excavated at the lower end, angle rounded, posterior margin concave at the end; cell more than half the length; costal vein forked near the end; first subcostal at one-fourth before end of cell, trifid, the first branch anastomosed for a short distance to fork of the costal, beyond its base,

fourth subcostal emitted near to the first and slightly touching the second beyond its base; discocellular slender, radial from above the middle; the middle median close to end of cell, lower about one-third; submedian recurved: hindwing short; costa convex, apex excavated, exterior margin convex; cell about half the length; costal vein curved upward at the base; subcostal bent upward to the costal near the base, first branch near end of the cell; discocellular slender; the middle median close to end of cell, lower at one-fourth. Body moderately stout; antennæ minutely biciliated; frontal tuft projecting; palpi obliquely ascending, compactly clothed, second joint reaching beyond the tuft, apical joint short, conical; legs long, squamous, spurs long, slender.

Type, F. chromataria.

FASCELLINA CEYLONICA (Plate 187, Fig. 3, 3*a* larva).

Dark olive-green, fading to olivaceous ochreous-brown: forewing with several short blackish transverse strigæ, an indistinct blackish-speckled transverse antemedial, medial, and a postmedial line, the area between the two latter darker coloured, the former line bent inward to the costa, the outer line angulated and obsolescent at the apex; costal border lilacine-grey: hindwing with a few scattered black scales, and a very indistinct darker transverse fascia. Underside ochreous-yellow; basal areas palest; strigæ distinct; forewing suffused with pale violaceous, the base of costa being yellowish; crossed by a medial oblique ferruginous band, which is angled inward to the costa on its outer end and is also outwardly bordered with a lilacine-white line: hindwing crossed by a broad medial pale ferruginous curved band, the inner border of which is curved, the outer border waved and edged with lilacine-white, this band in *F. chromataria* being waved on each side, and the inner border merging into the outer and thence ending together above the anal angle.

Expanse $1\frac{4}{10}$ inch.

Larva with 10 legs; looped; purplish-black, varied with purple-red on anterior segments; with four pairs of short red conical dorsal prominences; head cleft above. Pupa purple-black, narrow; head truncate.

"Feeds on Cinnamomea" (*Thwaites*).

Genus ORSONOBA.

Orsonoba, Walker, Catal. Lep. Het. B. M. xx. p. 218 (1860).
Gonodontis (part) Hübner, Verz. bek. Schmett, p. 287.

Forewing rather long, costa slightly arched towards the end, exterior margin oblique, acutely angulated, posterior margin concave towards the end; cell narrow, fully half the length; first subcostal at one-fifth before end of cell, second close to

the first, third near end of the cell, trifid, sixth from end of cell; discocellular concave, radial from the middle; two upper medians from end of cell, lower at about one-fifth: hindwing short, costa very short, concave in the middle, apex rather pointed, exterior margin angulated at end of first subcostal, and at upper median vein; cell half the length; first subcostal near end; two upper medians from end of cell, lower at one-fifth; discocellular obliquely concave. Body moderately slender; antennæ in male broadly bipectinated to one-third the end, the branches ciliated; antennæ setaceous in female; palpi thick, broad, somewhat porrected, third joint minute; legs rather stout, moderately long, spurs rather short.

Type, O. Rajaca.

ORSONOBA RAJACA (Plate 187, Fig. 1, 1*a* ♂ ♀, 1*b* larva).

Orsonoba Rajaca, Walker, Catal, Lep. Het. B. M. xx. p. 219 (1860).
Pradiota abruptaria, Walker, Ms. B. M. Coll.

Cinereous-ochreous; wings transversely speckled with pale ferruginous; forewing crossed by an antemedial inwardly-oblique pale dusky ferruginous rather indistinct diffuse line, and a broad similar postmedial fascia, both being bent inward near the costa; an indistinct minute white-centred blackish dot at end of the cell: hindwing with similar coloured indistinct medial and a postmedial narrow fascia, the former crossing a white-centred blackish spot at end of the cell.

Expanse ♂ $1\frac{4}{10}$ ♀ $1\frac{7}{10}$ inch.

Larva with 10 legs; looped; dusky olivaceous-brown, with a few short fine dorsal hairs, some minute dorsal points and two larger prominences on the sixth and twelfth segment. Pupa enclosed between leaves.

"Feeds on a Convolvulaceous plant." (*Madras, Elliot*).

ORSONOBA CLELIA (Plate 187, Fig. 2, ♀).

Phalæna Clelia, Cramer, Pap. Exot. iii. p. 172. pl. 288, f. B. C. (1780).
Gonodontis Cleliaria, Hübner, Verz. bek. Schmett, p. 287 (1818-25).
Azelina Clelia, Walker, Catal, Lep. Het. B. M. xx. p. 195.

Cinereous; wings sparsely speckled with minute dark ferruginous scales: forewing crossed by a dark ferruginous-speckled inwardly-oblique antemedial line, and a similar waved denticulated postmedial line; the lower area between the lines mostly covered with confluent ferruginous strigæ, the discal area also traversed by a ferruginous fascia; a blackish-speckled white-centred lunule at end of the cell: hindwing crossed by a medial and a postmedial ferruginous fascia, the former crossing a black-bordered white spot at end of the cell; exterior borders also slightly suffused with ferruginous.

Expanse 2 inches.

Genus PETELIA.

Petelia, H. Schæffer, Samm. Aussereur, Schmett. f. 524 (1858).
Bargosa, Walker, Catal. Lep. Het. B. M. xxi. p. 479 (1860).

Wings short, broad: forewing triangular; cell half the length; first subcostal at one-fifth, second approximate, quadrifid, sixth from end of cell; discocellular very slender, outwardly oblique, nearly straight; radial from the middle; the middle median close to end of cell, lower fully two-fifths: hindwing convexly angular in the middle; cell nearly half the length; first subcostal near the end; discocellular very slender, outwardly oblique; middle median close to end, lower fully two-fifths. Body stout; abdomen keeled, laterally tufted in male; thorax laxly clothed; palpi obliquely porrected, compressed, second joint extending half beyond the eyes, third joint short, cylindrical; antennæ of male very long, bipectinated to one-third the tip, ciliated; setaceous in female; legs long, squamous, hind tibiæ not thickened, spurs moderately long, slender.

Type, P. medardaria.

PETELIA MEDARDARIA (Plate 193, Fig. 2, 2*a*, ♂ ♀, 2*b* larva).

Petelia medardaria, H Schæffer, Samm. Aussereur, Schmett. f. 534 (1858), ♂.
Bargosa Chandubija, Walker, Catal. Lep. Het. B. M. xxi. p. 480 (1860), ♂ ♀.
Bargosa distracta, Walker, *id.* p. 481, ♂.
Bargosa Chacoraca, Walker, *id.* p. 481, ♀.
Ephyra strigulataria, Walker, *id.* xxvi. p. 1575 (1862), ♂ ♀.

Ochreous-brown; wings with a lilacine tinge; with numerous short slender transverse black strigæ. Male crossed by a subbasal and a medial oblique blackish line, both being more or less diffuse; the strigæ more numerously clustered before the apex of both wings; a small black spot at end of the cell, that on the hindwing with white centre; bordering the lines, and across the discal area are diffused ochreous shades; marginal points black. Female with the transverse lines more or less obsolescent. Underside ochreous-white; with broad brownish marginal band, and large black cell spot. Antennæ of male blackish cinereous, base and vertex in female white.

Expanse $1\frac{4}{10}$.

Larva with 10 legs; smooth; purplish red, with slender longitudinal black lines; spiracles white. Pupa red, greenish in front, segments ringed with yellow.

Genus ALANA.

Alana, Walker, Catal. Lep. Het. B. M. xxxv. p. 1567 (1866).
Pachydia (part), Guénee, Phal. ii. p. 137 (1857).

Female. Wings short, broad; forewing acute at the apex, costa very convex

at the base, exterior margin hardly oblique, very slightly convex; cell two-fifths the length; first subcostal about two-fifths, second contiguous, quadrifid, sixth from end of cell; discocellular very slender, outwardly-oblique; middle median near end, lower at two-fifths: hindwing convex; first subcostal close to end of cell, discocellular extremely slender; middle median close to end of cell, lower at one-third. Body very stout; palpi ascending to level of vertex; rather narrow, third joint cylindrical, nearly half length of second; antennæ setaceous; legs long, slender, spurs long and slender.

Type, A. vexilliaria.

ALANA VEXILLIARIA (Plate 193, Fig. 3, ♀).

Pachydia vexilliaria, Guénee, Phal. ii. p. 138 (1857), ♀; Walker, Catal. Lep. Het. B. M. xxiii. p. 1020.

Pachydia capitata, Walker, Catal. Lep. Het. B. M. xxiii. p. 1019 (1861), ♀.

Alana rubiginata, Walker, *id.* xxxv. p. 1568 (1866), ♀.

Female. Dark ferruginous; brownish basally and exteriorly; crossed by numerous darker brown strigæ. Forewing crossed by three undulating darker ferruginous lines, of which the outer is medial; a submarginal wavy brown line, and a whitish-speckled subapical patch, some speckles partly extending down the submarginal line; the area between the medial and second line also slightly white speckled: hindwing with a subbasal ferruginous line, and a waved discal brown line; marginal points on both wings whitish. Antennæ, and vertex whitish.

Expanse ♀ $1\frac{5}{8}$ inch.

Note.—Male unknown (? *Hyperythra Riobearia*, Walker).

Genus SABARIA.

Sabaria, Walker, Catal. Lep. Het. B. M. xxi. p. 492 (1860).

" Wings moderately broad: forewing slightly convex along the costa, rectangular at the tips, exterior margin convex in the middle and slightly excavated on each side: hindwing with the exterior border slightly emarginate, interior angle rather prominent. Body moderately stout; palpi very short, not extending to the front of the head, third joint conical, about one-fourth length of the second; antennæ moderately pectinated to three-fourths the tip; abdomen not extending beyond hindwing; legs stout, bare, spurs long."

SABARIA CONTRACTARIA.

Sabaria contractaria, Walker, Catal. Lep. Het. B. M. xxi. p. 492 (1860), ♂.

" Male. Cinereous; with a luteous tinge, which is most apparent on the underside: forewing irregularly covered with transverse pale brownish points and minute

streaks; costa with two nearly triangular pale brownish spots: hindwing more thickly covered with paler and more minute points.

"Expanse 10 lines."

Hab. Ceylon. In collection of E. L. Layard.

Family EROSIIDÆ.

Forewing either long and narrow, or short and broad, sometimes dentate: hindwing short, generally broad, dentate or notched, in some almost caudate. Both wings in some genera longitudinally convoluted when at rest. Palpi slender, porrect, or incumbent; antennæ short, curly, robust, velvety, crenulated, rarely pectinate in the male.

Larva with 16 legs; cylindrical, truncate at the end; with a few short fine hairs. Pupa short, stout, head broad; formed in a slight web.

Note.—The genera comprised in this family were arranged by Guénee and Walker with the Microniidæ. They have, however, no affinity with that family, and should be removed near to the Agaristidæ and Chalcosiidæ.

Genus GATHYNIA.

Gathynia, Walker, Catal. Lep. Het. B. M. xxvi. p. 1639 (1862).

Wings small. Forewing narrow, apex almost convex, exterior margin oblique and slightly convex; cell half the length; first subcostal from about one-third before end of cell, bifid at one-third from its base, third close to and almost touching the first its entire length, bifid near its end, fifth from very close to end of cell, sixth from the end; discocellular slender, zigzag, radial from upper angle; middle median close to end of cell, lower at two-thirds: hindwing very short, costa very convex at the base, concave towards the end, exterior margin outwardly oblique anteriorly, dentated, the cilia long at the angles; cell half the length; costal much recurved; two subcostals from end of cell; discocellular very slender, radial from the middle; two upper medians from end of cell, lower at one-half before the end. Body rather stout; antennæ stout, curly, compressed, laminated in front, the blades not separated; palpi slender, linear, slightly oblique, smooth, projecting beyond the head; legs rather short, stout, smoothly squamous, spurs long. Has the habit of convoluting the forewings when at rest.

Type, G. miraria.

GATHYNIA MIRARIA (Plate 187, Fig. 4.)

Gathynia Miraria, Walker, Catal. Lep. Het. B. M. xxvi. p. 1639 (1862).

Cinereous-brown, darker speckled; forewing with an indistinct darker spot at

end of the cell, and a curved discal fascia; a slender short black line from the apex, which is bordered inwardly by luteous; hindwing with a narrow sinuous black-bordered luteous discal line, and a black sinuous marginal line, both interrupted by a longitudinal pale medial fascia; two outwardly oblique black streaks on the costa.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Taken at "Dickoyia" (*Green*).

Has the habit of folding the forewings longitudinally when at rest.

Genus DIRADES.

Dirades, Walker, Catal. Lep. Het. B. M. xxxv. p. 1650 (1866).

Wings small. Forewing narrow, elongated, slightly rounded at the apex, exterior margin oblique, posterior margin concave towards the end; cell half the length; first, second, and third subcostals close together, first at nearly half before end of the cell, third bifid near its end, fifth and sixth on a footstalk at one-third beyond the cell; discocellular slender, radial from near upper end; middle median at one-third, lower at two-thirds before end of the cell; hindwing short, costa arched at the base, fringed; exterior margin sinuous, angulated below apex and in the middle; cell half the length, disposed along middle of the wing; two subcostals from end of cell; discocellular slender, radial from the middle; two upper medians from end of cell, lower at one-third. Body stout; antennæ short, curly, thick, compressed; palpi smooth, slender, rather short; legs slender, smooth, hind tibiæ slightly incrassated, spurs long, slender.

Type, D. binotata.

DIRADES BINOTATA (Plate 186, Fig. 7, ♀).

Dirades binotata, Walker, Catal. Lep. Het. B. M. xxxv. p. 1650 (1866).

Dark cinereous, sparsely speckled with minute black scales: forewing with a postmedial ferruginous-bordered cinereous line, which is curved inward and upward on the middle of the disc; below it is a similar coloured curved line, the inner border of which is ferruginous and forms a dark patch; a submarginal sinuous cinereous-bordered black line, the space between it and the exterior margin being greyish-brown: hindwing with a transverse curved slender antemedial ferruginous-bordered cinereous line, and a more distinct waved discal line, beyond which is the submarginal sinuous line with the space between it and outer margin greyish-brown; the lower basal and apical area thickly speckled with ferruginous.

Expanse $\frac{9}{10}$ inch.

DIRADES CONIFERA (Plate 186, Fig. 8).

Male. Cinereous ochreous-brown: forewing with an outwardly-oblique short

antemedial blackish-bordered cinereous line, which is curved upward and forms a similar postmedial line, and below it is a large pale-bordered dark brown, almost black, conical patch on the posterior margin; outer border traversed by a submarginal series of small blackish-speckled spots: hindwing with a pale slender cinereous antemedial and a curved discal line, the inner and basal area being mostly dusky ferruginous; a submarginal series of minute black speckled spots.

Expanse $\frac{8}{10}$ inch.

DIRADES PRUNARIA.

Dark cinereous purplish-brown, sparsely black speckled: forewing with an ill-defined slightly ferruginous-bordered darker medial costal triangular-shaped patch, below which is a similar posterior patch, both appearing almost as a transverse constricted band; a submarginal black slender line: hindwing crossed by an indistinct ferruginous waved discal line, and a less distinct similar marginal line.

Expanse $\frac{7}{10}$ inch.

DIRADES ADJUTARIA (Plate 186, Fig. 9).

Erosia adjutaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 849 (1861), ♀.
Erosia verticaria, Felder et Rogen. Lep. Nov. Reise, pl. 128, f. 7 (1875).

Cinereous-brown: forewing with an outwardly-oblique short medial and a postmedial ferruginous-bordered cinereous line, the outer line being curved at its lower end, but not joined to the inner line; a similar coloured curved line on the posterior border, the inner area of which is blackish-ferruginous; exterior margin narrowly ferruginous, with a slender submarginal sinuous black-bordered cinereous line: hindwing crossed by a curved medial and angulated discal ferruginous-bordered cinereous line, and a submarginal sinuous black-bordered cinerous line; the area between the medial and discal lines being dusky ferruginous.

Expanse $\frac{6}{10}$ inch.

Taken at "Dickoyia" (*Green*).

DIRADES OBSCURARIA (Plate 186, Fig 6).

Cinereous-ochreous, flecked with short brown strigæ: forewing with an outwardly curved transverse antemedial and a postmedial ferruginous-brown diffuse line, both angulated outward in the middle, the latter line ending in a ferruginous spot on the posterior margin; a submarginal series of minute black points; some blackish flecks along the costal border: hindwing with a medial and discal pale-bordered ferruginous angulated line, and a similar sinuous marginal line. Front of head, palpi, and forelegs blackish.

Expanse $\frac{8}{10}$ inch.

Taken at "Panduloya" (*Green*).

DIRADES FERRUGATA.

Dirades ferrugata, Walker, Catal. Lep. Het. B. M. xxxv. p. 1651 (1866).

Cinereous-brown, suffused with ferruginous. Wings with an antemedial and postmedial transverse undulating darker line: forewing with a pale costal stripe from near the base: hindwing whitish, and speckled along the abdominal border. Head in front dark brown; abdomen whitish towards the apex; forelegs cinereous-brown; middle and hind legs whitish.

Expanse $\frac{10}{12}$ inch.

DIRADES QUADRICAUDATA (Plate 186, Fig. 1, ♀, 1*a* larva.)

Erosia quadricaudata, Walker, Catal. Lep. Het. B. M. xxiii. p. 847 (1861), ♀.
Erosia varisaria, Walker, *id.* p. 848, ♀.

Reddish cinereous: forewing with a few indistinct transversely-disposed black antemedial points, an outwardly oblique short black postmedial costal streak, and a short angular streak on posterior margin; two or three indistinct black dots also below end of the upper streak; exterior margin with a ferruginous-brown narrow fascia, which is inwardly-bordered anteriorly by a slender black sinuous line: hindwing with a transverse angulated ferruginous-brown bordered cinereous discal line, the inner border of which has black points; marginal border ferruginous, inwardly-bordered by a cinereous-edged blackish line; some black speckles at the base, and on abdominal margin. Cilia ferruginous; front of head, and palpi, blackish.

Expanse 1 $\frac{1}{10}$ inch.

Larva with 16 legs; cylindrical; anal segment truncate; colour dark purple, with a few very fine short clavate hairs; spiracles white. Pupa short, thick, head truncate; formed within a slight web.

"Feeds on Cinchona" (*Thwaites*).

DIRADES PALACA (Plate 186, Fig. 2).

Erosia Palaca, Walker, Catal. Lep. Het. B. M. xxiii. p. 849 (1861), ♀.

Very pale purplish-cinereous, numerously flecked with blackish strigæ: forewing with a very indistinct transverse blackish-speckled ferruginous curved antemedial line, a prominent discal blackish-bordered whitish angulated line, the borders of which are also slightly suffused with ferruginous; and an angulated submarginal series of black points, which are ferruginous-bordered below the apex: hindwing with a subbasal blackish line, a similar discal angulated line with a blackish patch on its upper anal end, the anterior end ferruginous-bordered; a ferruginous streak at end of the cell and along the median to its base; a medial

submarginal ferruginous-bordered black sinuous line. Front of head, palpi, and forelegs blackish.

Expanse 1 to $1\frac{1}{10}$ inch.

Taken at "Pelloya" (*Green.*)

DIRADES RHAGAVATA (Plate 186, Fig. 3).

Erosia Rhagavata, Walker, Catal. Lep. Het. B. M. xxiii. p. 848 (1861), ♀.

Whitish cinereous, with numerous short transverse very pale brown strigæ: forewing crossed by an indistinct ferruginous-speckled antemedial line, and a waved postmedial line; some black speckled points below the apex: hindwing with the medial area from the base devoid of brown strigæ; with a ferruginous-bordered white discal line, which is slightly curved to the median vein, where it is convexly angular, and from thence waved to above anal angle, its upper end being dusky speckled; a blackish cinereous-bordered sinuous submarginal line, and some black apical dots; a ferruginous line at end of the cell, which is continued up the median to its base. Front of head, and legs in front whitish.

Expanse $1\frac{1}{10}$ inch.

DIRADES LILACINA (Plate 186, Fig. 4).

Pale lilacine-grey: forewing sparsely flecked with pale brown; with two transversely disposed antemedial black dots, a ferruginous-speckled bordered blackish postmedial irregular short line, below which is a constricted conical blackish-bordered ferruginous spot; an upper submarginal ferruginous-bordered black lunular line: hindwing with the anterior border devoid of brown flecks; the posterior half darker, with ferruginous and prominent black flecks; a transverse recurved slender black-bordered white discal line, which is angulated below the middle, and has a dark ferruginous upper patch near its lower end; a ferruginous streak at end of cell, a submarginal ferruginous-bordered black sinuous line. Front of head, palpi, and forelegs black.

Expanse 1 inch.

Taken at "Bamagalla, Dec." (*Mackwood.*)

DIRADES PARVULA (Plate 186, Fig. 5.)

Nearest allied to *D. lilacina*. Smaller; pale greyish-ochreous, minutely brown speckled: forewing with some darker flecks along the costa; a recurved antemedial indistinct blackish-speckled line, and a postmedial angulated ferruginous-brown line, which is blackish at the costal end, and is indistinctly continuous with a dusky black patch on the posterior margin; a curved sinuous submarginal line, which is brown-bordered below the apex: hindwing with a subbasal blackish speckled line, an acutely angular pale-bordered black discal line with a blackish upper patch near

anal end, a middle submarginal black lunular line, and a black streak at end of cell. Front of head, palpi, and forelegs blackish.

Expanse $\frac{5}{8}$ inch.

Taken at "Pelloya" (*Green*).

DIRADES IRRORATA (Plate 186, Fig. 10).

Cinereous-white, numerously covered with purplish black fleckles: forewing with three equidistant transverse ochreous fasciæ, and a marginal series of black points; a whitish spot at end of the cell: hindwing with three ill-defined ochreous fasciæ, and an interrupted submarginal lunular whitish line; a triangular white spot at end of the cell.

Expanse $\frac{6}{10}$ inch.

DIRADES LATIFASCIATA (Plate 186, Fig. 12, 12*a*, ♂ ♀, 12*b* larva).

Grey: forewing crossed by a broad medial dark chocolate brown band, and a narrow marginal streak below the apex; the inner border of the band bent inward at the costal end and concave below the cell, the outer border broadly convex in the middle: hindwing with a similar narrower band, which is broken posteriorly, and does not extend to the abdominal margin; marginal line dark brown, cilia paler.

Expanse ♂ $\frac{7}{8}$, ♀ $1\frac{1}{8}$ inch.

Larva with 16 legs; short, cylindrical, head small, anal segment truncate; colour dark purple brown; head and anal segments yellow, black spotted and with a few short black hairs.

Pupa short, thick, head truncate; purplish red with black segmental lines.

"Feeds on Fagiæa zeylanica" (*Thwaites*).

DIRADES CONCHIFERATA (Plate 186, Fig. 11).

White: forewing transversely blotched and flecked with ochreous red, interspersed with blackish speckles along the costal area; the blotches more defined across the disc, where they form a lunular fascia and are bordered by an inner blackish speckled line; exterior margin blackish speckled and with a submarginal black lunular line: hindwing with the posterior half ochreous red, very irregularly bordered across the middle, and thickly marked with black strigæ; some whitish interstices on middle of the abdominal margin; two slender red streaks also ascending across the disc to the costa. Front of thorax, head, palpi, forelegs above, and tip of abdomen thickly brown speckled. Cilia ochreous red, alternated with black.

Expanse $\frac{7}{10}$ inch.

DIRADES? FIGURARIA.

Erosia figuraria, Walker, Catal. Lep. Het. B. M. xxiii. p. 850 (1861).

"Purplish cinereous. Wings rather ample; lines black, irregular; interior line much interrupted, exterior line irregularly curved, attenuated behind the middle in the forewing and in the middle of the hindwing; submarginal line composed of minute dots, which are irregular in the hindwing. Forewing slightly convex along the costa, somewhat rounded at the tips; hindwing extending beyond the abdomen, with the exterior border slightly bent.

Expanse 6 lines."

In Coll. E. L. Layard.

Family OXYDIIDÆ.

Forewing acute or subfalcate at the apex: hindwing triangular, exterior margin even. Antennæ long, broadly bipectinated, ciliated; palpi porrect or obliquely ascending, small; legs long, slender.

Genus MARCALA.

Marcala, Walker, Catal. Lep. Het. B. M. xxvi. p. 1764 (1862).

Forewing elongate, triangular, apex acute, subfalcate; cell very long, about two-thirds the length, narrow at the end; first subcostal at one-fifth, bifid, slightly touching the costal near its end by a short spur; third trifid, sixth from end of the cell; discocellular short, radial from the middle; the middle median at one-fifth, lower at two-fifths: hindwing rather short, triangular, exterior margin convex; cell half the length; subcostal much curved at the base, first branch close to end of cell; discocellular outwardly oblique; middle median about one-sixth; lower at one-third. Body short, rather stout; antennæ bipectinated to near the tip, the branches ciliated; palpi ascending, curved, laxly squamose, third joint short, cylindrical; legs long, slender, spurs moderately long, slender.

Type, M. tinctaria.

MARCALA GALBULATA (Plate 185, Fig. 5).

Numeria galbulata, Felder, Novara Reise, Lep. iv. pl. 133, f. 20 (1875) ♂.

Purplish-ochreous brown, with a glaucescent tinge: forewing with a transverse inwardly-oblique ochreous-green brown-bordered band, which is traversed by short indistinct brown strigæ, and encloses a brown-bordered white spot at end of the cell; the band is dilated anteriorly and the borders are inclined inward at their costal end: hindwing with a brown antemedial transverse line. Antennæ brown, shaft purplish-brown; forelegs brown in front.

Expanse $1\frac{3}{10}$ inch.

MARCALA SULPHURESCENS (Plate 185, Fig. 8).

Pale greenish-ochreous; sparsely speckled with indistinct short brown strigæ: forewing with a transverse purple-brown inwardly-oblique antemedial and a postmedial slightly waved line, the latter ending in a small purplish-brown apical patch; a brown-bordered oval white spot at end of the cell: hindwing with a transverse medial purple brown slightly diffused line, and a small speckled spot at end of the cell. Antennæ, front of head, and forelegs in front purple-brown; palpi and legs ochreous.

Expanse $1\frac{5}{10}$ inch.

MARCALA SATURATARIA (Plate 204, Fig. 4).

Geometra saturataria, Walker, Catal. Lep. Het. B. M. xxii. p. 519 (1861).

Lilacine brownish-ochreous. Wings with a few short transverse slender black strigæ: forewing with a large broad white-edged dark green irregular-bordered medial patch, and a smaller contiguous patch before the apex: hindwing with a similar patch on middle of abdominal border. Shaft of antennæ ochreous-white, the branches brown.

Expanse $1\frac{1}{8}$ inch.

Family ŒNOCHROMIDÆ.

Wings stout, velvety. Forewing acute or slightly falcate at the apex: hindwing not angular; radial vein present in this wing. Front villose, not tufted; palpi stout, straight; antennæ pectinated in male; in some on one side only; thorax woolly; abdomen thick, smooth; legs robust, short, hind tibiæ not thickened.

Genus NOREIA.

Noreia, Walker, Catal. Lep. Het. B. M. xxiv. p. 1092 (1862).

Wings broad: forewing triangular; cell half the length; first subcostal emitted at one-seventh before end of the cell, anastomosed to the costal near its end, second very close to the first, quadrifid, the second partly anastomosed to first and the third partly to second, sixth from end of the cell; discocellular slightly concave, radial from the middle; the middle median close to end of the cell, lower about one-third: hindwing short, broad, triangular; cell half the length; costal and subcostal curved upward at the base; first subcostal near end of the cell; discocellular outwardly recurved, radial from the middle; the middle median near end of cell, lower about one-third. Body moderately stout; antennæ in female setaceous; palpi ascending, curved, reaching the vertex, compressed, laxly squamous in front, third joint extremely minute; legs smooth, slender, rather long, spurs rather short, slender.

Type, N. perdensata.

NOREIA AJAIA (Plate 185, Fig. 3).

Timandra Ajaia, Walker, Journ. Linn. Soc. Zool. iii. p. 195 (1859).
Noreia perdensata, Walker, Catal. Lep. Het. B. M. xxiv. p. 1092 (1862).
Decetia posticata, Walker, Catal. Lep. Het. B. M. xxxv. p. 1557 (1866).

Pale cinereous-brown; crossed by a pale luteous postmedial line, which is obsolescent at the apex of the forewing; a short blackish streak at end of each cell. Palpi and legs dark cinereous-brown.

Expanse $1\frac{2}{10}$ inch.

NOREIA INAMATA (Plate 185, f. 4).

Acidalia inamata, Walker, Catal. Lep. Het. B. M. xxii. p. 755 (1861).
Acidalia simpliciaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 793 (1861).
Noreia luciferata, Walker, *id.* xxiv. p. 1093 (1862).

Yellowish-testaceous, very sparsely speckled with minute brown scales; crossed by a dark luteous-brown nearly straight narrow discal band; a brown dot at end of each cell; costal edge of forewing, and the ciliæ luteous. Antennæ luteous-brown from near the base; palpi luteous.

Expanse $1\frac{3}{10}$ inch.

Family AMPHIDASIDÆ.

Moths of Bombyciform appearance. Wings thick, roughly squamous: forewing generally elongated towards the tips, triangular: hindwing short. Body thick, hairy; head small; palpi short; legs short, thick, femora villose; spurs short; antennæ pectinated or plumose in male, setaceous in female. In some genera the female is apterous or with rudimentary wings.

Larva looped; with 10 legs; twig-like; head large. Lives uncovered on trees. Pupa thick, head obtuse, apex acutely pointed; subterranean.

Genus BUZURA.

Buzura, Walker, Catal. Lep. Het. B. M. xxvi. p. 1531 (1862).

Forewing long, triangular; cell more than half the length; first subcostal at about one-eighth, bifid near its base, third trifid, sixth from end of cell; discocellular inwardly-oblique, concave, radial from its middle; the middle median near end, lower at half before end of cell: hindwing short, broad, exterior margin convex; cell long, nearly two-thirds the length; first subcostal very close to end of cell; discocellular bent above the middle; the middle median close to end, lower at one-third. Body thick; palpi porrect, very short, not projected beyond the front, compactly clothed; antennæ stoutly bipectinated to one-third the tip, the branches ciliated; legs stout, hind tibiæ incrassated, spurs moderately long.

Closely allied to Amphidasis.

BUZURA STRIGARIA (Plate 188, Fig. 1, 1*a*, ♂ ♀, 1*b c* larva).

Buzura strigaria, Moore, Proc. Zool. Soc. 1879, p. 416, ♂.

Male and female. Cinereous-white. Wings with numerous short transverse black-speckled grey strigæ; cilia alternated with ochreous: forewing with a waved subbasal and an angulated sinuous discal transverse black-speckled line, both with ochreous-yellow bordering fascia, the latter also with a sinuous-divided cluster of black speckles beyond the angle; a less defined medial black-speckled ochreous fascia: hindwing with an angulated sinuous discal black line, a waved ochreous medial fascia, an ochreous fascia bordering the discal line, and an interrupted submarginal similar fascia. Thorax and abdomen with ochreous bands; front of head, and legs above with black bands.

Expanse ♂ $2\frac{3}{8}$, ♀ 3 inches.

Larva with 10 legs; elongated; twig-like; with a few fine very short black hairs and minute speckles; head flat in front; colour dark green in male, with dusky segmental bands and a slight sublateral longitudinal streak; spiracles white with red centre and outer ring; head rough; anterior prominence and front legs dark purple. Paler green in female, with pale purplish segmental bands and numerous minute black and white speckles. Pupa dark purple-black; head of male with antennal points; anal segment acute.

"Feeds on Cassia auriculata" (*Thwaites*).

Genus CUSIALA.

Allied to Buzura. Forewing shorter, more triangular in shape; hindwing longer; exterior margin more convex, scalloped. Body less robust, abdomen keeled above; antennæ in male serrated, and ciliated, to near the end, the ciliæ composed of duplex tufts from each point, shaft broad and coarsely squamous.

Type, C. boarmoides.*

CUSIALA SUIASASA.

Boarmia Suiasasa, Walker, Catal. Lep. Het. B. M. xxi. p. 373 (1860), ♂.

Male. Whitish, very sparsely irrorated with brown scales: forewing crossed by a brown antemedial curved angulated band Both wings also with a similar angulated discal band, and a marginal row of black points. Tip of palpi, and bands on legs brown.

Expanse ♂ $1\frac{3}{8}$ inch.

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* *C. boarmoides* is a species from Darjeeling, the male of which is larger than *C. Suiasasa*; of darker colour, with a brown bordered inner and discal angulated darker brown line, and submarginal fasciæ.

CUSIALA DISTERMINATA.

Boarmia disterminata, Walker, Catal. Lep. Het. B. M. xxi. p. 491 (1860), ♂.

Male. Whitish. Wings very sparsely irrorated with brown scales; forewing with a broad medial transverse angulated-bordered brown band: hindwing with a narrow discal angulated brown-speckled band; some marginal black points on forewing towards the apex. Tip of palpi, and bands on legs brown.

Expanse $1\frac{3}{8}$ inch.

This may possibly be a variety of *V. suiasasa*.

CUSIALA RAPTARIA.

Boarmia raptaria, Walker, Catal. Lep. Het. B. M. xxi. p. 373 (1860), ♀.

Wings white, brown-speckled; crossed by a discal black-speckled angulated denticulated line with outer bordering brown-speckled sinuous fascia, and a similar submarginal fascia; marginal points black: forewing also with an antemedial less defined black-speckled line and bordering fascia. Body brown-speckled; a band on front of head, tip of palpi, and bands on forelegs dark brown.

Expanse 2 inches.

FAMILY BOARMIIDÆ.

Wings alike in colour and markings, most often dentate, not angular. Forewing triangular, apex more or less prolonged, obtuse: hindwing rounded, sometimes more dentated than forewing. Body slender; front not prominent nor tufted; palpi porrect or slightly ascending, squamous, occasionally hirsute; antennæ almost always pectinated or strongly ciliated in male, filiform or dentated or rarely pectinated in female; legs rather long, hind tibiæ mostly incrassated and very long.

Larva with 10 legs, stick like, without eminences or ordinarily with that on the 12th segment, and two lateral projections on the 6th; head large, flattened in front. Feeds upon trees, plants, and sometimes on lichens. Pupa thick, acute at the apex; most frequently buried, sometimes amongst leaves.

Genus MEDASINA.

Male. Differs from typical Menophra in its much larger size of wings: forewing with the costal vein bifid near its end; first subcostal free in the male, in the female slightly touching the costal above the base of the branch, second trifid, fifth from end of cell; discocellular bent below the radial; middle median near end of cell, lower at two-fifths. Palpi porrect, stout, third joint minute, conical; antennæ very long, broadly bipectinated and ciliated.

Type, M. strixaria.

MEDASINA STRIXARIA (PLATE 190, FIG. 1, 1*a* ♂ ♀, 1*b* larva).

Hemerophila Strixaria, Guénee, Phal. i. p. 217 (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 318.

Male. Brownish-ochreous. Wings with numerous short slender transverse dark brown strigæ: forewing paler along the anterior half; the strigæ blackish along base of the costa and exterior border; crossed by an irregular, angulated very oblique discal black line, which is thickest hindward, and a submarginal pale wavy line, the inner area between which is dark brown from the angle below the apex, and the outer marginal area paler; a diffuse black spot at end of the cell, and two brown streaks ascending from the posterior margin before the discal line: hindwing with the exterior base free from brown strigæ; a diffuse black spot at end of the cell; an irregular discal line, and a wavy pale outer-bordered brown submarginal fascia. Abdomen with a slender black band near the base; front of head, palpi, bands on fore and middle legs, and speckles on hind legs, dark brown. Female more uniformly brownish-ochreous: forewing with the discal line slender throughout its length, and with an indistinct speckled sinuous line across the middle; marginal lunular line black.

Expanse ♂ 3, ♀ 3¼ inches.

Taken at "Dickoya" (*Green*).

Larva with 10 legs; twig-like; elongated; head flat in front; a slight dorsal pointed prominence on 2nd segment, and two short conical prominences on 8th, and two or three lateral tubercles on the 6th; colour olive-brown, numerously covered with dark purple-brown speckles and short longitudinal narrow streaks; spiracles black ringed. Pupa dark purple-red; head obtuse, anal segment pointed.

"Feeds on Acanthads" (*Thwaites*).

Genus MENOPHRA.

Hemerophila,* Stephens, Catal. Brit. Ins. ii. p. 125 (1829); *id.* Illust. Haust. iii. p. 189 (1830); Walker, Catal. Lep. Het. B. M. xxi. p. 315 (1860).

Synopsia (part), Hübner, Verz. bek. Schmett. p. 317.

Male. Forewing elongate, triangular; apex somewhat pointed, exterior margin slightly scalloped; cell fully half the length; first subcostal about one-seventh, first and second joined at their base, first slightly touching the costal near the base, third near end of cell, trifid, sixth from end; discocellular slightly concave and outwardly oblique, radial from the middle; the middle median close to end of cell, lower nearly one-third: hindwing short, broad; exterior margin convex, deeply scalloped; cell half the length; first subcostal close to end; discocellular outwardly concave; middle median very close to end, lower about one-third. Body slender; palpi

* Used by Hübner, Tentamen, p. 2 (1806).

obliquely ascending, laxly squamous, third joint very short, stout; antennæ rather broadly bipectinated to near the tip, ciliated; legs squamous, hind tibiæ incrassated, spurs moderately long, slender.

Type, M. abruptaria.

MENOPHRA CANIDORSATA (Plate 187, Fig. 6, ♂).

Hemerophila canidorsata, Walker, Catal. Lep. Het. B. M. xxxv. p. 1578 (1866), ♀.

Ferruginous-brown. Wings numerously covered with darker brown strigæ. Male: forewing crossed by a slender black oblique antemedial and a postmedial irregular line, the former curved inward across the cell, and again to the costa, the latter with a single curve to the costa; a black spot at end of the cell; a dark iron-grey interrupted fascia extending from base to below the apex and bordering the outer line below the angle: hindwing with a slender black postmedial line outwardly bordered by a dark iron-grey fascia. Thorax with a dark iron-grey band; bands on forelegs black. Female with the grey fascia on forewing and abdominal band paler: hindwing with outer border below the dark fascia pale ochreous.

Expanse ♂ $1\frac{4}{8}$, ♀ $1\frac{5}{8}$ inch.

Taken at "Punduloya" (*Green*).

MENOPHRA IMBECILIS (Plate 187, Fig. 7, ♀).

Brownish-white, numerously speckled with dark-brown scales: forewing crossed by a slender black sinuous antemedial and a postmedial line; a submarginal pale-bordered sinuous dark-brown fascia, and a marginal lunular line; a black dot at end of the cell: hindwing with a dark brown-speckled medial fascia encompassing a large spot at end of cell; a slender black discal sinuous line, a dark-brown pale-bordered sinuous submarginal fascia, and a marginal lunular line. Brown-speckled bands on base of abdomen; legs also brown speckled.

Expanse ♀ $1\frac{3}{10}$ inch.

Genus NARAPA.

Allied to typical Alcis (*A. repandaria*). Wings smaller: forewing with the first subcostal about one-eighth, bifid near the base, the first branch anastomosed to the costal for a short distance, third trifid; two upper medians from end of cell, lower at nearly one-half before the end: hindwing short; cell half the length; middle median close to end, lower nearly one-half. Body shorter; antennæ with very broad ciliated branches to near the tip.

Type, N. adamata.

NARAPA ADAMATA (Plate 187, Fig. 8, ♂).

Boarmia adamata, Felder et Rogen. Novara Reise, Lep. v. pl. 126, fig. 5, 5*a* ♂ (1875).

Male. Cinereous-white. Wings numerously brown speckled: forewing crossed

by a black recurved antemedial line, and a postmedial denticulated line, beyond which is a black-speckled sinuous fascia traversed by a white line; marginal points black; both lines with a blackish-speckled parallel fascia; a similar slender sinuous fascia also crossing the middle, each dilated at the costal end; a cluster of black speckles in middle of the disc: hindwing with a slight black-speckled medial fascia, a black denticulated discal line with bordering fascia, and a submarginal sinuous fascia traversed by a white line; marginal lunular line black. Body brown speckled; abdomen with black bands; palpi, fore and middle legs with black bands.

Expanse $1\frac{2}{10}$ inch.

Taken at "Ballagalla; January" (*Mackwood*); Dickoya (*Green*).

NARAPA SIMILARIS (PLATE 187, FIG. 9, ♂).

Darker than *N. adamata,* with more diffused black-speckled lines and fasciæ: forewing with the inner line and fascia more oblique; with a large diffused black cell spot: hindwing with a distinct smaller spot. Underside ochreous, with broad black marginal band on both wings, and large discal spots.

Expanse $1\frac{3}{10}$ inch.

NARAPA UMBRATA (PLATE 187, FIG. 10, ♂).

Male. Vinaceous umber-brown. Wings sparsely flecked with slender short black strigæ; crossed by a black curved antemedial wavy line, a postmedial angulated denticulated line, and a submarginal sinuous black fascia traversed by a white line; both lines with a black-speckled bordering fascia; a slender fascia also crossing the middle, which encompasses a rounded discal spot; costal ends of the lines and fasciæ dilated: hindwing with a slight black medial fascia, a slender mark at end of the cell, a denticulated discal line, and submarginal fascia with a white sinuous line; marginal lunular line black. Thorax and abdomen with a black-speckled band; a white band at base of the abdomen; palpi, fore and middle legs with black bands.

Expanse $1\frac{3}{10}$ to $1\frac{6}{10}$ inch.

NARAPA INDISTINCTA (PLATE 187, FIG. 5, ♂).

Male. Dusky-brown. Wings crossed by an indistinct black antemedial and an angulated discal line, a submarginal whitish sinuous line, a less defined sub-basal streak, and a medial fascia; a round speckled spot at end of the cell: hindwing with a slight medial fascia, a black lunule at end of the cell, a curved discal sinuous line, and indistinct whitish submarginal fascia. Tip of palpi, and bands on fore and middle legs blackish.

Expanse $1\frac{3}{10}$ inch.

Genus BOARMIA.

Boarmia Treitschke, Schmett. Eur. v. 2, p. 433 (1825), *id.* vi. 1, p. 187 (1827); Curtis, Brit. Ent. vi. fol. 280 (1829); Duponchel, Lep. Fr. vii. pp. 107, 327 (1829); Stephens, Illust. Haust. iii. p. 191 (1831).

Ectropis, Hübn. Verz. Schmett. p. 316 (1825-27).

Male. Forewing elongate-trigonate; cell half the length; first subcostal at one-eighth, bifid, first sometimes slightly touching the costal near end, third close to end of cell, trifid, sixth from the end; discocellular outwardly-oblique, concave, radial from the middle; two upper medians from end of cell, lower at two-fifths: hindwing short, exterior margin scalloped; cell more than half the length, very broad; first subcostal very close to end; discocellular bent in the middle; the middle median very close to end of cell, lower about two-fifths. Body slender; palpi obliquely ascending, clothed with long lax hairy scales, third joint minute, almost concealed; antennæ slender, very finely bipectinated to near tip, the branches short, slender, and delicately ciliated; legs squamous, fore tarsi long, hind tibiæ slightly incrassated, spurs short, slender, hind tarsi nearly as long as hind tibiæ.

Type, B. consonaria.*

BOARMIA DIFFUSARIA (Plate 187, f. 11, ♂, Plate 188, f. 2, ♀, 2*a* larva).

Boarmia diffusaria, Walker, Catal. Lep. Het. B. M. xxi. p. 382 (1860).

Pale brownish-ochreous, the female more cinereous-ochreous; minutely brown speckled: forewing crossed by a brown antemedial, and an ill-defined postmedial duplex line with blackish points; a submarginal sinuous pale-bordered broken fascia, and marginal lunular points; some black strigæ on the costal border: hindwing with a brown-speckled ill-defined inner line, a lunule at end of the cell, a denticulated discal duplex line, submarginal fascia, and marginal lunular line. Palpi and legs with blackish bands; abdomen with brown band near the base.

Expanse $1\frac{3}{8}$ to $1\frac{5}{8}$ inch.

Taken at "Kandy; March" (*Mackwood*).

Larva with 10 legs; a slight dorsal prominence on 3rd and 12th segment; colour purplish-ochreous, longitudinally flecked with short purple-brown streaks in male, and with a lateral line in female. Pupa purple-red, greenish in front.

BOARMIA BHURMITRA (Plate 191, Fig. 2, ♀).

Boarmia Bhurmitra, Walker, Catal. Lep. Het. B. M. xxi. p. 381 (1860), ♀.

Boarmia susceptaria, Walker, Catal. Lep. Het. B. M. xxxv. p. 1584 (1866), ♀.

Female. Very pale brownish-ochreous. Wings speckled with ochreous-brown

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* *Roboraria* was given as the type of Cymatophora by Hübner, Tentamen, p. 2 (1806). *Punctularia* is the type of Tephrosia, Boisd., both being generically distinct from Boarmia.

scales: forewing crossed by an indistinct brown denticulated antemedial and postmedial line, and an interrupted submarginal sinuous fascia; a slight brown-speckled fascia also crosses the middle, which includes a streak at end of the cell: hindwing with a similar medial fascia, discal denticulated line, and submarginal fascia.

Expanse 2 to $2\frac{1}{8}$ inches.

This may probably be a large female of *B. diffusaria*.

BOARMIA (?) CEYLONARIA.

Boarmia Ceylonaria, Nietner, Obs. on the Enemies of the Coffee-tree in Ceylon, p. 23 (1861).

"Wings yellowish-grey, marbled with brown.

"Expanse less than 2 inches.

"Larva feeds upon the Coffee-tree; colour when young, dark, when older light-grey, marked with dark patches and stripes along the sides" (*Nietner*).

"*Hab.* Ceylon."

BOARMIA (?) EXCLUSARIA.

Boarmia exclusaria, Walker, Catal. Lep. Het. B. M. xxi. p. 490 (1860), ♀.

"Female. Brownish fawn colour. Head and front of thorax brown. Wings speckled with brown; interior line composed of blackish points; middle line brown, diffuse, oblique, nearly straight; exterior line blackish, denticulated; submarginal line dingy whitish, irregular, denticulated, partly and diffusedly bordered with brown. Forewing hardly denticulated: hindwing distinctly denticulated, whitish, and speckled with brown interiorly, brown exteriorly.

"Expanse 20 lines."

In coll. E. L. Layard.

BOARMIA (?) DIFFLUARIA.

Boarmia diffluaria, Walker, Catal. Lep. Het. B. M. xxi. p. 490 (1860), ♀.

"Female. Whitish; minutely speckled with brown. Wings more speckled exteriorly, brownish about the exterior border; the three usual lines brown, undulating, denticulated; two regularly denticulated lines near the exterior border. Forewing with the exterior and submarginal lines reflexed towards the costa; discal mark indicated by a black point, apparent also beneath and corresponding to a like point on the underside of the hindwing.

"Expanse 16 lines."

In coll. E. L. Layard.

Genus PSEUDANGERONA.

Male. Wings comparatively short: forewing triangular; cell half the length; costal vein bifid near the end; first subcostal near end of the cell, slightly touching the branch of costal above its base, second trifid, fifth from end of cell; discocellular

slightly concave, radial from the middle; the middle median near end of cell, lower at nearly half: hindwing broad, exterior margin very convex; cell about half the length; first subcostal and middle median both near end of cell, lower median about half. Body moderately stout; palpi obliquely ascending, reaching to near level of eyes, compactly clothed, third joint minute; antennæ broadly bipectinated to one-third the tip, the branches ciliated; legs smoothly scaled, spurs short.

Type, P. separata.

PSEUDANGERONA SEPARATA (Plate 202, Fig. 8, ♂).

Boarmia separata, Walker, Catal. Lep. Het. B. M. xxi. p. 381 (1860), ♂.
Boarmia retractaria, Walker, Catal. Lep. Het. B. M. xxi. p. 386 (1860), ♂.
Boarmia intectaria, Walker, *id.* xxvi. p. 1535 (1862).

Testaceous. Wings with numerous short dusky-brown transverse strigæ, which are confluent and thickly disposed obliquely across the lower half of forewing and across the subbasal area of the hindwing, and also across the submargin of the latter wing, thus forming a broad oblique fascia across both wings, and a submarginal fascia on the hindwing. Both wings also with a slender blackish transverse discal sinuous line, and a dusky brown cell lunule with pale centre. Tip of palpi, abdomen, and bands on fore and middle legs dusky brown.

Expanse 1 6/10 inch.

Genus CATORIA.

Male. Forewing comparatively shorter and broader than in Cymatophora, Boarmia and Alcis; the apex less produced and somewhat rounded; cell shorter; costal vein bifid near its end; first subcostal about one-tenth, joined to middle of the costal branch, second close to end of cell, trifid, fifth from the end of cell; disco-cellular concave, radial from the middle; the middle median near end of cell, lower at one-half: hindwing short; exterior margin almost even, convex; cell nearly half the length; first subcostal close to end; discocellular outwardly-concave; middle median at one-fifth, lower nearly half. Body short, rather stout; palpi obliquely projected in front, laxly clothed beneath, apex conical; antennæ broadly bipectinated to one-third the tip, the branches very long and finely ciliated; legs long, more slender than in above genera, spurs long, slender.

Type, C. sublavaria.

CATORIA SUBLAVARIA (Plate 190, Fig. 2, 2*a* ♂, ♀).

Boarmia sublavaria, Guénée, Phal. i. p. 256 (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 378.

White, numerously flecked with olivescent-grey scales; crossed by an ante-medial, medial, postmedial and a submarginal recurved row of blackish points, which are more or less distinct, each row being indistinctly bordered by a contiguous

olivescent-grey sinuous fascia; a dot at end of each cell; and a marginal row of points. Underside blackish-cinereous, the outer borders darker, and with three whitish marginal patches; a large rounded black spot at end of each cell.

Expanse $1\frac{5}{8}$ inch.

CATORIA PROCURSARIA (Plate 191, Fig. 3).

Boarmia procursaria, Walker, Catal. Lep. Het. B. M. xxi. p. 375 (1860).

Brownish-white, numerously speckled with minute brown scales; wings crossed by an antemedial and a postmedial slender blackish denticulated line, two zigzag submarginal less distinct lines, and a marginal row of points; a large black round spot with whitish centre at end of each cell. Front of head, and palpi ochreous-brown; front legs brownish. Underside with the cell spots more distinct; a blackish subapical patch on each wing.

Expanse $1\frac{2}{8}$ inch.

Genus CHOGADA.

Nearest to typical Alcis (*A. repandaria*). Forewing comparatively narrower and longer; outer margins less uneven; more oblique; venation similar, excepting that the first subcostal is emitted further from end of the cell. Body shorter, stouter; palpi larger, more distinctly separated, third joint longer, distinct, clavate; antennæ longer, with much longer ciliated branches to one-third the tip, the branches being curved inward beneath.

Type, C. alienaria.

This genus comprises a large and widely distributed group of species, which are distinguishable at a glance from its allies by the peculiarity of the pattern of the markings on both upper and under sides, and the possession of a prominent, mostly tridentate, whitish cell spot on both wings.

CHOGADA ALIENARIA (Plate 191, Fig. 1, 1*a*. ♂ ♀ 1*b*. larva).

Boarmia alienaria, Walker, Catal. Lep. Het. B. M. xxi. p. 370 (1860), ♂.

Boarmia gelidaria, Walker, Catal. Lep. Het. B. M. xxvi. p. 1537 (1862), ♀.

Male. Whitish. Wings crossed by an inwardly-oblique slender black antemedial line and a sinuous postmedial line, the latter angulated outward near upper end; the basal area thickly brown-speckled, the outer area crossed by two brown-speckled sinuous fasciæ, between which is a blackish fascia traversed by a sinuous white line; marginal lunules black; a tridentate white-centred black mark at end of each cell; middle area also slightly brown speckled. Thorax brown speckled; a black band near base of abdomen; palpi, and fore and middle legs with brown bands. Female with basal, and outer brown fasciæ less defined.

Expanse $1\frac{4}{8}$ to $1\frac{6}{8}$ inch.

Larva with 10 legs; green; with two purple-brown biconical dorsal prominences on sixth segment and two dorsal white spots on twelfth segment; head and legs pale purple-red; anterior and anal segments in male laterally black-speckled, spiracles black ringed. Pupa red, greenish in front.

"Feeds on Cinnamomea, &c." (*Thwaites*).

CHOGADA INJECTARIA.

Boarmia injectaria, Walker, Catal. Lep. Het. B. M. xxi. p. 376 (1860), ♀.
Boarmia sublectaria, Walker, Catal. Lep. Het. B. M. xxvi. p. 1535, (1862), ♂.

Cinereous-brown, speckled with minute black scales. Wings crossed by an inwardly-oblique, undulated, angulated, slender black postmedial line, a less defined medial speckled fascia, which encompasses a large ovate diffused cell spot, and a submarginal zigzag speckled fascia traversed by a pale line: forewing also with an antemedial similar slender black line. Palpi brown; fore and middle legs with brown bands.

Expanse $1\frac{5}{10}$ inch.

Genus SERRACA.

Wings comparatively shorter than in Chogada. Forewing triangular, with the costal vein bifid near the end; first subcostal near end of cell, touching the costal branch in the middle, second trifid; discocellular concave; middle median close to end of cell, lower at one-half: hindwing dentated; first subcostal close to end of cell; discocellular slightly concave; middle median close to end of cell, lower at two-fifths. Antennæ with shorter branches; palpi smaller, third joint very short, obtuse.

SERRACA TRANSCISSA (Plate 190, Fig. 3, 3*a* ♂ ♀).

Boarmia transcissa, Walker, Catal. Lep. Het. B. M. xxi. p. 380 (1860), ♂.
Boarmia lineataria, Walker, Catal. Lep. Het. B. M. xxxv. p. 1585 (1866), ♂.

Brownish-cinereous, speckled with dark brown: forewing crossed by a slender black inwardly-oblique angulated antemedial line, a similar postmedial denticulated line, a submarginal whitish-bordered speckled sinuous line, and a slender marginal lunular line; each line with parallel brown-speckled fasciæ; a less distinct line also crosses the middle, encompassing a pale centred lunular cell spot: hindwing with a short black basal, a recurved medial, and a denticulated discal line, followed by the submarginal sinuous white-bordered line, and a marginal lunular line; the discal and submarginal line with parallel brown fasciæ; a pale centred oval cell spot.

Expanse ♂ $1\frac{3}{8}$, ♀ $1\frac{4}{8}$ inch.

Genus BYLAZORA.

Bylazora, Walker, Catal. Lep. Het. B. M. xxvi. p. 1549 (1862).

Forewing elongate, somewhat narrow; costa much arched and fringed at the

base, apex not acute, exterior margin slightly convex and dentate; cell fully half the length at upper end, longer at the lower end; first subcostal from angle close to end of cell, bifid, third approximate, trifid, sixth from end of cell; discocellular outwardly oblique, concave, radial from the middle; two upper medians from end of cell, lower at one-third: hindwing short, broad, exterior margin very convex, dentate; cell about three-fifths; first subcostal very close to end; discocellular very oblique, concave at upper end; middle median near end of cell, lower at one-third. Body rather slender, frontal tuft lax; palpi porrect, pilose, second joint long, third joint minute, conical; antennæ bipectinated and ciliated to near tip; legs smooth, hind tibiæ incrassated, spurs long, slender.

BYLAZORA CEYLONICA (Plate 193, Fig. 4, 4*a*, ♂ ♀).

Greyish-white. Wings thickly covered with confluent greyish-brown flecks: forewing crossed by an oblique antemedial, medial, and a postmedial denticulated black line, and a less defined sinuous submarginal fascia, each dilated at the costal end; marginal points black: hindwing with a similar medial and discal line, and diffused submarginal fascia. Body grey flecked; abdomen with narrow blackish dorsal bands; tip of palpi, and legs above brown.

Expanse, 1⅖ to 1⅜ inch.

Genus OPHTHALMODES.

Ophthalmodes, Guénee, Phal. i. p. 283 (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 446.

Forewing elongate, triangular; exterior margin slightly convex and dentated; cell nearly half the length; costal vein bifid near its end; first subcostal at one-sixth, free, second contiguous, trifid, fifth from end of cell; discocellular outwardly oblique, concave, radial from above the middle; the middle median near end of cell, lower fully half: hindwing short, broad, exterior margin convex, dentated; cell nearly half the length; first subcostal close to end; discocellular outwardly concave; middle median close to end, lower nearly half. Body rather stout, abdomen smooth; palpi obliquely porrect, stout, laterally broad, clothed with long lax hairy scales, second joint projecting partly beyond the front, third joint very short, thick; antennæ in male broadly bipectinated to one-third the tip, branches ciliated; in female moderately bipectinated; legs moderately long, squamous, spurs long, stout.

Type, O. herbidaria.

OPHTHALMODES HERBIDARIA (Plate 191, Fig. 4, ♀).

Ophthalmodes herbidaria, Guénee, Phal. i. p. 283 (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 446.

Olivaceous-ochreous: forewing crossed by a sharply defined black-speckled sinuous antemedial, medial, and a postmedial line, the two latter lines with very

acute points; the middle line encompassing a whitish lunule at end of the cell; each line dilated at the costal end; beyond is a submarginal sinuous fascia with a contiguous outer row of small points, and a marginal row of quadrate spots: hindwing with an inner black-speckled sinuous fascia, a whitish-centred lunular cell spot, a sinuous discal line, submarginal sinuous fascia with contiguous outer points, and marginal spots; all the markings with slightly paler borders. Thorax and abdomen with slender black-speckled bands; palpi, and forelegs dark brown. Underside brownish-cinereous, with a broad darker submarginal band, and large cell spot.

Expanse 2½ inches.

OPHTHALMODES ? CARITARIA.

Boarmia Caritaria, Walker, Catal. Lep. Het. B. M. xxi. p. 489 (1860), ♂.

"Male. Pale cinereous, with a very slight greenish tinge. Wings with the lines blackish, much denticulated; submarginal line less denticulated than the other two, here and there slightly double; marginal dots black; a broadly blackish bordered ringlet in each disc. Underside with a large bluish spot in each disc, and with a broad brownish border; antennæ broadly pectinated to seven-eighths the tip.

"Expanse 22 lines."

In coll. E. L. Layard.

Genus RACOTIS.

Male. Forewing somewhat elongate, triangular; exterior margin slightly dentated; cell nearly half the length; first subcostal near end of cell, bifid near its base, third contiguous, trifid, sixth from end of cell; discocellular concave, radial from the middle; the middle median close to end of cell, lower at two-fifths; a vascular cavity above base of the submedian: hindwing short, broad, exterior margin convex, dentated; cell half the length; first subcostal and middle median close to end of cell, lower median about one-third. Body rather stout; palpi porrect, very laxly clothed, second joint extending its length beyond the head, third joint decumbent, cylindrical, about one-third the length of second; antennæ serrated to one-third the tip, with fine cilial tufts from the points; legs long, rather slender; hind tibiæ tumid, spurs moderately long and slender.

RACOTIS BOARMIARIA (Plate 192, Fig. 3, 3a, ♂ ♀, 3b larva).

Hypochroma boarmiaria, Guénee, Phal. i. p. 282 (1857).
Boarmia inconclusa, Walker, Catal. Lep. Het. B. M. xxi. p. 382 (1860).

Olivaceous brownish-ochreous. Wings numerously covered with short transverse dark olivaceous-brown strigæ, which are most numerous externally, and also irregularly form the ordinary disposed transverse sinuous markings, which are much

diffused; the discal denticulated line being the most defined; cell spots also diffused; marginal points black. Tip of palpi, and bands on legs dark brown.

Expanse $1\frac{5}{8}$ to $1\frac{7}{8}$ inch.

Larva with 10 legs, looped; bright green, with a pure white lateral line, and a short streak on 3rd and 12th segment; some reddish blotches above and below the line. Pupa dark red, tinged with green beneath; thorax oblique.

"Feeds on Plumbago rosea" (*Thwaites*).

Genus PINGASA.

Hypochroma (part), Guénee Phal. i. p. 275 (1857); Walker, Catal. Lep. Het B. M. xxi. p. 427.

Differs from Hypochroma.* Forewing somewhat more triangular, cell much shorter, being two-fifths the length; first subcostal close to end, second quadrifid; second and sixth from end of the cell; discocellular concave at upper end, bent before the middle, lower end slender, radial from the angle; middle median near end of cell, lower fully two-fifths: hindwing somewhat broader; abdominal margin much longer; cell two-fifths the length; two subcostals from end of cell; discocellular outwardly-oblique, bent outward near upper end, radial from the angle; two upper medians from end of cell, lower at one-third; a raised tuft of short hairs at end of cell and across base of the medians. Abdomen of male with short dorsal hairy tufts; palpi obliquely ascending, more compactly and densely clothed, third joint slender, nearly as long as the second; antennæ with much shorter branches, which extend to one-third the tip; legs smooth; hind tibiæ incrassated and enfolding a lengthened hairy tuft, spurs long and slender.

Type, P. ruginaria.

PINGASA CRENARIA (Plate 192, Fig. 1, 1*a*, 1*b*, larva).

Hypochroma crenaria, Guénee, Phal. i. p. 278 (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 432.

White. Wings indistinctly speckled with minute ochreous scales; crossed by an ochreous-red slender acutely-sinuous discal line; the outer marginal borders traversed by two indistinct reddish and ochreous-speckled sinuous fasciæ; a slight reddish lunular cell streak: forewing also with a sinuous reddish antemedial line; marginal line reddish. Underside pure white, with a black submarginal band, which is dilated below the apex of each wing. Branches of antennæ, and frontal band, and bands on fore tibiæ ochreous.

Expanse $1\frac{1}{8}$ to $1\frac{5}{8}$ inch.

Larva with 10 legs; looped; thickish; olive-green; with purple-brown oblique

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* Guénee figures two species of Hypochroma (*percomptaria* and *muscosaria*), of which the former may be taken as the type.

lateral lines and a longitudinal sublateral line. Pupa pale purplish-brown, with blackish speckles and segmental marks.

PINGASA LEUCOSTIGMARIA.

Boarmia leucostigmaria, Nietner, Observations on the Enemies of the Coffee-tree in Ceylon, p. 23 (1861).

"Wings greyish-white, beautifully fringed, and marked with dark lines and red pencilling; beneath both are marked with a large black stripe."

"Expanse 2 inches."

"Larva feeds on the coffee-tree" (*Nietner*).

PINGASA MINIMARIA (Plate 192, Fig. 2).

Hypochroma minimaria, Guénee, Phal. i. p. 279 (1857).
Hypochroma parvula, Walker, Catal. Lep. Het. B. M. xxi. p. 435 (1860).

Cinereous-white. Wings speckled with minute grey scales; crossed by a discal slender black denticulated line; the outer marginal borders traversed by two sinuous reddish-ochreous and grey-speckled fasciæ; marginal points black. Underside with a blackish marginal band, and small inflated cell spot.

Expanse $\frac{9}{10}$ inch.

Genus ELPHOS.

Elphos, Guénee, Phal. i. p. 285 (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 449 (1860).

Wings large, broad: forewing triangular; costa convex, exterior margin slightly sentated; cell nearly half the length; first subcostal at nearly one-fourth, second and third approximate, third trifid, sixth from end of cell; discocellular outwardly oblique, concave, radial from the middle; the middle median at one-fifth, lower fully one-half: hindwing very broad, exterior margin convex, more dentated; cell nearly half the length; first subcostal near the end; discocellular obliquely-concave; middle median at one-fourth, lower at one-half. Body moderately slender, abdomen short; palpi obliquely ascending, broad, compressed, clothed with long hairy scales, third joint minute, conical; antennæ of male broadly bipectinated to near tip, the branches pubescent; legs long, slender, hind tibiæ slightly thickened, spurs long.

Type, E. hymenaria.

ELPHOS HYMENARIA (Plate 193, Fig. 1, ♂).

Elphos hymenaria, Guénee, Phal. i. p. 285, pl. 16, fig. 4, ♀ (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 449.

Male. Brownish-cinereous: forewing crossed by a cinereous white-bordered bluish-waved antemedial line, a similar sinuous postmedial, and submarginal sinuous line; the lines bordered on both sides with contiguous parallel irregular sinuous black-speckled ochreous fasciæ; a similar ochreous fascia also across the middle and

encompassing a pale cell streak; the anterior portion of the medial area more or less ochreous-white; basal and lower medial area also black-speckled: hindwing with a distinct rather large black cell spot; a cinereous-white bordered black sinuous discal and submarginal line, each with its bordering black-speckled ochreous fascia; a similar fascia also across the middle, and a broader submarginal and marginal fascia. Abdomen with brown bands; palpi and forelegs above dark brown.

Female. With the basal and medial area more or less whitish; more uniformly black-speckled throughout; the discal lines and fasciæ being broken and partly obliterated.

Expanse ♂ $3\frac{1}{4}$, ♀ $3\frac{1}{2}$ inches.

Genus AMBLYCHIA.

Amblychia, Guénee, Phal. i. p. 214 (1857); Walker, Catal. Lep. Het. B. M. xxi. p. 313.

Wings large: forewing broad, triangular; apex very acute, subfalcate, exterior margin convex in the middle; cell nearly half the length; first subcostal at one-fourth, second and third contiguous, third trifid, sixth from end of cell; discocellular slightly concave, radial from the middle; the middle median close to end, lower at fully half before the end: hindwing very broad, quadrate, extending much beyond the abdomen; exterior margin deeply sinuous above the middle; cell two-fifths the length; first subcostal and middle median close to end of the cell; discocellular bent near the middle; lower median at one-half before end of the cell. Body stout; abdomen smooth; palpi obliquely ascending, very broad, compactly pilose, compressed, extending half beyond the front, third joint extremely minute; antennæ in male with very long ciliated branches to one-third the tip, setaceous in female; legs long, smooth, hind tibiæ thickened, spurs moderately long, slender.

AMBLYCHIA TORRIDA (Plate 188, Fig. 3, ♂).

Amblychia torrida, Moore, Proc. Zool. Soc. 1877, p. 621.

Colour lilacine ochreous-brown. Differs from *A. angeronaria* in the forewing both above and beneath having the transverse medial pale maculated band terminating very broadly on the costa in the male, and in broad quadrate spots in the female. On the underside the distinct subbasal curved dusky-band which crosses both wings of *A. angeronaria* are obsolete, and the outer transverse lunular bands are replaced by a uniform broad pale-brownish fascia.

Expanse ♂ $3\frac{1}{4}$, ♀ $3\frac{3}{4}$ inches.

Family EUSCHEMIDÆ.

Wings ample, thick, velvety: forewing prolonged apically: hindwing short,

broad; radial vein present. Body robust, hairy, abdomen woolly beneath; palpi thick, third joint bare; antennæ long, strongly bipectinated in both sexes; legs robust, hind tibiæ enlarged, grooved beneath and enclosing a long fascicle of silky hairs from the base, spurs short.

Larva with 10 legs; when in repose stands erect with the head and anterior segments bent downward; head rather small. Pupa obtuse in front, anal segment terminated with numerous minute hooked bristles. The moth is diurnal in its habits, remaining out in the evening till just after sunset.

Genus EUSCHEMA.

Euschema, Hübner, Verz. bek. Schmett. p. 175 (1818-25); Walker, Catal. Lep. Het. B. M. ii. p. 405.
Hazis, Boisduval, Voy. Astrolabe, Ent. i. p. 203 (1832); Guénee, Phal. ii. p. 188 (1857).
Heleona (part), Swainson, Zool. Illust. 2nd ser. iii. p. 116 (1832).

Forewing elongate, narrow, triangular; costa almost straight, apex obtuse, exterior margin very oblique; cell half the length; first subcostal close to end of cell, second from the end, quadrifid; discocellular bent obliquely inward near upper end and acutely outward in the middle, radial from the upper angle; middle median close to end of cell, lower nearly half: hindwing short, very broad, apex and exterior margin very convex, hardly dentate; cell half the length; two subcostals from the end; discocellular bent above the middle, concave below; radial from the angle; middle median close to end of cell, lower at two-fifths. Body stout, thorax very laxly clothed, abdomen lanuginose beneath, apex pointed, tufted laterally; palpi porrect, first and second joints broad, laxly clothed beneath, second joint extending a little beyond the front, third joint cylindrical, naked, as long as the second; antennæ long, bipectinated, the branches stout and ciliated, decreasing to the tip, female less pectinated; legs stout, smooth above, tibiæ fringed beneath; hind tibiæ incrassated, grooved beneath and enclosing a lengthened silky tuft from the base.

Type, E. militaris.

EUSCHEMA TRANSVERSA (Plate 189, Fig. 3 ♂, 3*a* larva).

Euschema transversa, Walker, Catal. Lep. Het. B. M. ii. p. 407 (1854).

Wings very pale cobalt-blue, with a slight purpurescent tinge: forewing with three blue-black basal longitudinal streaks, a short transverse streak from the costa beyond, and a round spot below base of lower median; a large outwardly-conical spot at end of the cell, a transverse zigzag discal band, and an irregular marginal band: hindwing with a blue-black basal streak, a large rounded spot at end of the cell, and a smaller spot near the abdominal margin; a slender zigzag discal band, and a marginal row of irregular spots. Thorax pale blue, with two transverse blue-black bands; abdomen above ochreous-white, with dark purplish-blue bands; head, palpi

and legs greyish; a blue band on the vertex; thorax and abdomen beneath ochreous-yellow.

Expanse $2\frac{3}{4}$ to $3\frac{1}{4}$ inches.

Larva with 10 legs; yellow; with a black-spotted bluish dorsal and sublateral band; anterior segments also black-spotted. Pupa within rolled leaf, reddish, with darker speckles on anterior part, two black eye-spots, black spiracles and segmental spots; anal segment with short spiny bristles.

"Feeds on Carallia integerrima" (*Thwaites*).

EUSCHEMA PRUNICOLOR (Plate 189, f. 2, ♂).

Euschema prunicolor, Moore, Proc. Zool. Soc. 1879, p. 414.

Upperside dark glossy purple-black: forewing with an elongated and a short ochreous streak between the lower median branch and submedian vein; two small bluish diaphanous spots within the cell, two at its end, a subapical oblique series and three on the disc: hindwing with an indistinct ochreous short subbasal patch, some brighter ochreous small spots on the disc, a submarginal zigzag series, and a marginal dentate series. Abdominal border partly yellow. Body yellow; head, thorax, and abdomen above with purple bands. Palpi black-tipt. Antennæ purple-black. Underside: forewing as above: hindwing with a short costal and subbasal band, and larger discal, submarginal and marginal spots than above. Legs above grey, yellow beneath.

Expanse $2\frac{3}{8}$ inches.

EUSCHEMA BELLISSIMA (Plate 189, f. 1, 1*a*, ♂ ♀, 1*b* larva).

Euschema bellissima, Moore, Proc. Zool. Soc. 1879, p. 414.

Male and female: purple-black: forewing with two pale-yellow elongated straight basal streaks, the upper within the cell, the lower beneath it, and a yellow spot above and another below the submedian vein; a large bluish-white diaphanous spot in middle of the cell, one below it, two at its end, and a transverse discal series of spots: hindwing with a broad yellow subbasal band, a medial irregular indistinct fascia, a zigzag discal and a marginal series of small yellow spots. Body yellow, with black-purple bands. Underside as above; the yellow markings broader and more prominent.

Expanse $2\frac{1}{8}$ to $2\frac{1}{2}$ inches.

Nearest allied to the Bornean species (*E. subrepleta*, Walk.).

Larva with 10 legs; green, with a lateral yellow stripe; spiracles black-ringed; legs red-speckled. Pupa purple-brown.

"Feeds on Carallia" (*Thwaites*).

CUSUMA.

Cusuma, Moore, Proc. Zool. Soc. 1879, p. 415.

Differs from Euschema (*E. militaris*, Linn.) in the abbreviated and trigonal shape of the forewing, the exterior margin being less oblique and the posterior margin shorter; neuration similar, the discocellulars, however, are less acutely angled and not curved posteriorly: hindwing also shorter and more convex exteriorly. Thorax clothed with shorter and less shaggy hair. Palpi smaller, less pilose, terminal joint shorter and slightly clavate.

CUSUMA VILIS (PLATE 189, FIG. 4, ♂).

Euschema vilis, Walker, Catal. Lep. Het. B. M. ii. p. 408 (1854).

Purplish-brown (probably purplish-black when fresh); forewing with a semi-hyaline curved discal macular band, a small spot beyond upper end of cell, a large oblique spot in middle of the cell, and a small spot near its base: hindwing chrome-yellow, with a purplish-brown marginal band traversed by a zigzag yellow line along its inner border from the anal end. Abdomen yellow, with purple-brown bands; tip of palpi, and legs above purple-brown; antennæ black.

Expanse $2\frac{1}{2}$ inches.

CUSUMA LIMBATA (PLATE 189, FIG. 5, ♀).

Cusuma limbata, Moore, Proc. Zool. Soc. 1879, p. 415.

Female. Upperside: forewing dark purple-black, with a bluish-white diaphanous oblique subapical spot crossed by two veins, and a small oblique spot within the cell: hindwing golden-yellow, with a broad wavy-bordered purple-black marginal band, which extends narrowly along anterior margin and terminates in a spot at its base. Thorax, head, antennæ, dorsal bands, and anal segment, purple-black. Abdomen above and beneath, and sides of thorax, golden yellow. Legs black above, yellow beneath. Underside of wings as above.

Expanse $2\frac{3}{8}$ inches.

Family GEOMETRIDÆ.

Wings smooth, generally entire, alike in both sexes. Forewing mostly acute or subfalcate at the apex. Hindwing rounded or angular in the middle: radial vein present. Body moderately stout; palpi generally straight, slender, sometimes varying in the sexes; antennæ of male very generally pectinated, with filiform tips, simple or crenulated in the female; abdomen sometimes crested; legs smooth, rarely long, not villose, hind tibiæ in some species with a single pair of spurs.

Larva looped in walking, elongated, stiff in repose, often rough; head generally

bifid at the top; second and anal segment frequently with two conical points. Lives uncovered on trees and low plants. Pupa enclosed in a web amongst leaves.

Genus GEOMETRA.

Geometra, Linn. S. N. 1, p. 519 (1758), *id.* Ed. xii. 11, p. 858 (1767); Haworth, Lep. Brit. 11, p. 271 (1809); Treits. Sch. Eur. v. 2, p. 430 (1825); Duponchel, Lep. Fr. vii. 2, p. 106 (1829); Boisd. Ind. Méth. p. 179 (1840); Steph. Catal. Brit. Lep. B. M. p. 169 (1850); Lederer, Vers. Eur. Span. p. 24 (1853); Guénee, Phal. i. p. 343 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 506.

Hipparchus, Leach, Edin. Enc. ix. p. 134 (1815); Samouelle, Ent. U. C. p. 253 (1819); Curtis, Brit. Ent. vii. fol. 300 (1830); Stephens, Ill. B. Ent. Haust. 111, p. 178 (1831).

Holothalassis, Hübner, Verz. bek. Schmett. p. 285 (1818-25).

Forewing moderately long, triangular; costa slightly arched towards end, apex acute, exterior margin oblique, convex; cell half the length; first subcostal near the end, second approximate, quadrifid, sixth from the end; discocellular deeply concave, radial from above the middle; the middle median close to end of cell, lower at fully two-fifths: hindwing broad, short, exterior margin convex, slightly scalloped; cell nearly half the length; first subcostal close to end; discocellular bent above the middle, radial from the angle; two upper medians from end of cell, lower at fully two-fifths. Body moderately slender; palpi porrect, narrow, second joint projecting beyond the front, very laxly clothed, third joint about one-third the length of second, slender, squamous; antennæ in male bipectinated, the branches stout, ciliated; legs rather stout, squamous, hind tibiæ thickened, spurs moderately long, slender.

Type, G. papilionaria.

GEOMETRA SPECULARIA (Plate 194, Fig. 1, ♀ 1*a* larva).

Geometra specularia, Guénee, Phal. i. p. 342 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 514 (1861).

Bright green; cilia paler: forewing with traces of a darker discal sinuous line; a small black lunular spot at end of the cell: hindwing with traces of a darker discal sinuous line; a small purplish-ochreous basal spot, and an irregular angulated-bordered transverse discal fascia enclosing a small black spot at end of the cell, the centre of the fascia being brighter coloured. Vertex and basal joint of antennæ white; front of head and palpi above ferruginous; legs white with dark-brown terminal bands; antennæ green.

Expanse 2 inches.

Larva with 10 legs; looped; slender; head bifid; a conical prominence on 12th segment; colour green; head and front legs pale purplish-red and darker

spotted. Pupa rather narrow, thorax very oblique; green; abdominal segments with minute darker speckles; spiracles pink.

Genus THALASSODES.

Thalassodes, Guénee, Phal. i. p. 359 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 547 (1861).

Wings delicate, almost semi-transparent: forewing triangular, rather short and broad; apex pointed; cell fully half the length; first subcostal close to end of cell, second with five branches, the sixth being thrown off from beyond base of second; discocellular bent above and below the middle, radial from upper angle; two upper medians from a footstalk at a short distance beyond the cell, lower fully two-fifths: hindwing short, broad, quadrate; apex pointed; cell one-third the length at upper end, half at the lower end; two subcostals at half beyond the cell; discocellular very oblique, bent above and below the middle, radial from upper angle; two upper medians at one-fourth beyond the cell, lower one-third before the end. Body slender; palpi straight, laxly clothed beneath, second joint in male extending a little beyond the head, third joint slender; in female both joints longer; antennæ long, in male broadly bipectinated to one-third the tip, branches slender and laxly ciliated, incumbent; antennæ in female filiform; legs slender, smooth, hind tibiæ not thickened, two pairs of short spurs. (*T. dissita* and *quadraria*.)

Type, T. pilaria, Guén.

THALASSODES DISSITA (Plate 194, Fig. 2♀, 2*a* larva).

Geometra dissita, Walker, Catal. Lep. Het. B. M. xxii. p. 519 (1861).

Glaucescent-green. Wings with numerous short slender transverse indistinct chalybeous-white strigæ, and a similar indistinct transverse discal slightly sinuous line, which is bent opposite the marginal angle on the hindwing. Shaft of antennæ and vertex white; front of head, tip of palpi, and forelegs above pale ochreous-brown, palpi, body and legs beneath white.

Expanse $1\frac{3}{10}$ to $1\frac{5}{10}$ inch.

Larva with 10 legs; looped; slender; head bifid; a pointed prominence on 12th segment; colour reddish above, greenish beneath; legs red.

Pupa pinkish, greenish in front; thorax and abdomen minutely black-speckled.

"Feeds on Barringtonia" (*Thwaites*).

THALASSODES IMMISSARIA.

Thalassodes immissaria, Walker, Catal. Lep. Het. B. M. xxii. p. 553 (1861).

"Male. Pale dull green, suffused with pale luteous. Wings with almost obsolete transverse whitish streaks, and with minute black marginal points: hind-

wings with an obtuse angle behind the middle of the exterior border. Cilia whitish at the base, the angles well defined. Antennæ slightly pectinated to beyond half the length.

"Expanse 16 lines."

In Coll. E. L. Layard.

THALASSODES LEUCOSPILOTA (Plate 194, Fig. 4 ♂).

Pale green. Wings crossed by a discal row of indistinct chalybeous-white dentate spots, the lowest on each wing being large and more distinct: forewing with a similar oblique subbasal series. Cilia purplish-cinereous, with a white spot at end of the veins. Front of head green; palpi, and forelegs above pale ochreous, abdominal tuft ochreous; body and legs beneath, and antennæ ochreous-white.

Expanse $1\frac{2}{10}$ inch.

THALASSODES NANDA.

Thalassodes Nanda, Walker, Catal. Lep. Het. B. M. xxii. p. 552 (1861), ♂.

"Pale testaceous. Wings with two white denticulated lines, which are nearly parallel to the exterior border, and are bordered with slightly deeper green than the ground colour. Vertex white.

"Expanse 8 lines."

THALASSODES RUBROLIMBATARIA (Plate 195, Fig. 5).

Amaurinia rubrolimbataria, Guénee, Phal. i. p. 386 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 603.

Thalassodes diserta, Walker, Catal. Lep. Het. B. M. xxii. p. 553 (1861), ♀.

Thalassodes simpliciaria, Walker, *id.* p. 553.

Pale green. Wings with a scarlet marginal line. Front of head, and forelegs above brownish; body and legs beneath white.

Expanse $\frac{8}{10}$ inch.

THALASSODES ? CHLOROZONARIA.

Thalassodes chlorozonaria, Walker, Catal. Lep. Het. B. M. xxii. p. 554 (1861).

"Male. Reddish fawn colour. Wings moderately broad; an oblique greenish broad reddish-bordered band: forewings slightly acute; a blackish dot near the tip of the costa; the band dilated exteriorly in front, abruptly retracted towards the costa, including a whitish reddish-bordered ringlet; costa hardly convex; exterior border moderately oblique. Palpi and antennæ as in *T. albannularia*. Thorax and fore part of abdomen greenish.

"Expanse 13 lines."

In Coll. E. L. Layard.

Genus THALERA.

Thalera, Hübner, Verz. bek. Schmett, p. 285 (1818-25); Stephens, Catal. Brit. Lep. B. M. p. 225 (1850); Lederer, Vers. Eur. Span. p. 25 (1853); Walker, Catal. Lep. Het. B. M. xxii. p. 592 (1861).

Forewing short, triangular; apex acute; cell nearly half the length; first and second subcostals from end of the cell, second quadrifid, sixth also from the end; discocellular deeply concave, radial from above the middle; two upper medians from end of cell, lower at one-third: hindwing quadrate; exterior margin slightly sinuous, angular in the middle; two subcostals from one-fourth beyond the cell; discocellular bent above the middle, radial from the angle; two upper medians at one-fourth beyond the cell, lower at one-fifth before the end. Body slender; palpi obliquely-ascending, laxly clothed beneath, third joint half the length of second, cylindrical; antennæ in male serrated, the points ciliated; legs long, slender, smooth, hind tibiæ long, thickened, with a terminal pair of spurs only in male, with two pairs in female.

Type, T. Thymiaria.

THALERA COSTIPUNCTATA (Plate 195, Fig. 4).

Dull glaucescent-green. Cilia cinereous-white. Wings with a very indistinct transverse discal row of whitish points, and a marginal row of white points: forewing with black streaks along the costal edge, and with traces of a whitish inner lunular line. Front of head, palpi, and forelegs above brownish; shaft of antennæ and vertex ochreous-white.

Expanse $\frac{8}{10}$ inch.

THALERA ACUTISSIMA (Plate 196, Fig. 7).

Thalera acutissima, Walker, Catal. Lep. Het. B. M. xxii. p. 596 (1861).

Olivaceous glaucescent-green. Wings with a transverse very indistinct whitish discal line, and an indistinct whitish marginal line; cilia pale yellowish; caudal angle of hindwing with a few blackish speckles. Vertex whitish; front of head, and palpi above brown; body and legs beneath whitish.

Expanse 1$\frac{4}{10}$ inch.

THALERA FLAVIFUSATA (Plate 194, Fig. 3, ♂, 3*a* larva).

Thalera flavifusata, Walker, Catal. Lep. Het. B. M. xxii. p. 596 (1861).

Green. Wings crossed by a slender reddish denticulated discal line, and a purple red lunular marginal line; cilia pale purplish; a small brown spot at end of each cell: forewing also with traces of an inner denticulated line. Shaft of antennæ and vertex white; front of head, tip of palpi, and legs above pale brown; body and legs beneath whitish.

Expanse ♂ $\frac{9}{10}$, ♀ $1\frac{2}{10}$ inch.

Larva with 10 legs; head bifid; a pointed prominence on 12th segment, colour yellow, with a dorsal slender red double line; middle segments with slender black dorsal looped-marks; legs black. Pupa pale green; abdominal segments minutely black-speckled.

"Feeds on Barringtonia" (*Thwaites*).

THALERA DISJUNCTA (PLATE 196, FIG. 5).

Thalera disjuncta, Walker, Catal. Lep. Het. B. M. xxii. p. 595 (1861), ♀.

Dull glaucescent-green; cilia whitish. Wings with a curved discal row of indistinct whitish points, a marginal slender ferruginous-brown line interspaced with white vein-points; a prominent rounded spot at end of each cell, composed of a yellow-bordered ferruginous brown ringlet with grey centre. Shaft of antennæ and vertex whitish; front of head, palpi and legs above ferruginous-brown.

Expanse $1\frac{2}{10}$ inch.

THALERA ALBANNULARIA.

Thalassodes albannularia, Walker, Catal. Lep. Het. B. M. xxii. p. 554 (1861).

"Male. Yellow. Wings moderately broad, minutely speckled with pale brown; a small white brown-bordered ringlet on each disc: forewings acute; costa very slightly convex; exterior border moderately oblique. Palpi short, obliquely ascending, third joint very minute; antennæ broadly pectinated nearly to the tips.

"Expanse 12 lines."

In Coll. E. L. Layard.

THALERA MERITARIA.

Geometra meritaria, Walker, Catal. Lep. Het. B. M. xxii. p. 522 (1861), ♀.

Female. Pale green; of a slight emerald tint. Wings with a yellowish-bordered purple-red narrow marginal band, which is chalybeous-speckled; cilia yellow; a large quadrate yellow-bordered purple-red spot at end of each cell; a discal series of yellow-bordered red spots, and a spot also near base of posterior margin of forewing; costa yellow and slightly red-speckled. Thorax green; abdomen above, shaft of antennæ and vertex, whitish; front of head, palpi and forelegs above ochreous-brown; body and legs beneath ochreous-white.

Expanse $\frac{9}{10}$ inch.

THALERA LÆSARIA.

Iodis læsaria, Walker, Catal. Lep. Het. B. M. xxii. p. 544 (1861).

"Female. Very pale green, wings very delicate; with an ochreous spot in the disc, and with an exterior slightly curved ochreous line; marginal points ochreous.

"Expanse $5\frac{1}{2}$ lines."

Genus JODIS.

Jodis, Hübner, Verz. bek. Schmett. p. 285 (1818-25); Stephens, Catal. Brit. Lep. B. M. p. 169 (1850); Guénee, Phal. i. p. 353 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 537 (1861).
Hemithea (part), Duponchel, Lep. Fr. viii. p. 106 (1829).
Chlorochroma (part), Dup. Catal. p. 224 (1844).

Forewing rather broad, triangular; apex obtuse, exterior margin very slightly convex; cell nearly half the length, broad; first subcostals very close to end of cell, slightly touching the costal, second from end, quadrifid, sixth also from the end; discocellular concave, radial from above the middle; the middle median very close to end of cell, lower two-fifths: hindwing short, broad; apex convex, exterior margin even, slightly angular in the middle; cell nearly half the length; two subcostals at one-fifth beyond the cell; discocellular outwardly-oblique, radial from above the middle; two upper medians from a short distance beyond the cell, lower at one-third before the end. Body slender; palpi porrect, short, slender, joints moderately distinct; antennæ bipectinated to tips, the branches stout and minutely ciliated in male, the branches short and thick in female: legs squamous, hind tibiæ thickened, with two pairs of slender spurs.

Type, J. vernaria.

JODIS THALASSICA (Plate 194, Fig. 6).

Dull glaucescent-green. Wings unmarked. Cilia paler. Abdomen cinereous-ochreous; front of head, tip of palpi, and forelegs above brown; body beneath and legs cinereous-ochreous; shaft of antennæ cinereous-ochreous.

Expanse $\frac{8}{10}$ inch.

JODIS INDECRETATA (Plate 194, Fig. 5, ♂).

Geometra indecretata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1555 (1862), ♀.

Pale green. Wings with a pale whitish discal line, which is oblique and nearly straight on the forewing and curved on the hindwing. Front of head, palpi, and forelegs above brownish; body and legs beneath white.

Expanse ♂ $\frac{6}{10}$, ♀ $\frac{7}{10}$ inch.

JODIS VIVILACA (Plate 195, Fig. 3, ♀).

Jodis vivilaca, Walker, Catal. Lep. Het. B. M. xxii. p. 544 (1861).

Pale green. Cilia greenish-white. Wings without markings, except a small black dentate cell spot. Front of head and palpi brown; body beneath whitish; legs brownish-white above.

Expanse $1\frac{1}{8}$ inch.

Genus NEMORIA.

Nemoria, Hübner, Zütr. Exot. Schmett. i. p. 25 (1818); *id.* Verz. bek. Schmett. p. 285 (1818-25); Stephens, Illust. iv. p. 412 (1835); *id.* Catal. Brit. Lep. B. M. p. 225 (1850); Lederer, Vers. Eur. Span. p. 25 (1853); Guénee, Phal. i. p. 345 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 531 (1861).

Forewing short, rather narrow; cell more than half the length; first subcostal close to end, second quadrifid, sixth from the end; discocellular concave, radial from above the middle; two upper medians from end of cell, lower at one-third before the end: hindwing broad; exterior margin convex; cell nearly half the length; two subcostals at one-fourth beyond the cell; discocellular outwardly-oblique, radial from above the middle; two upper medians from a short distance beyond the cell; lower at one-fourth before the end. Body slender; palpi porrect, small, laxly squamous, extending a little beyond the head; antennæ in male broadly bipectinated to one-third the tip, the branches ciliated; legs slender; hind tibiæ of male with one pair of spurs. (*N. viridaria.*)

Type, N. bistriaria (Hübn. Zütr. Exot. Schmett. 1, fig. 139).

NEMORIA SOLIDARIA.

Nemoria solidaria, Guénee, Phal. i. p. 348 (1857).
Jodis discessa, Walker, Catal. Lep. Het. B. M. xxii. p 544 (1861), ♀.
Nemoria lataria, Walker, *id.* xxv. p. 1558 (1862), ♀.

Pale green. Wings with two darker indistinct oblique lines: forewing with a less distinct inner line. Front of head ochreous-brown; body and legs beneath white; forelegs above pale ochreous-brown.

Expanse $\frac{}{10}$ inch.

NEMORIA VIATA (Plate 195, Fig. 6, ♀).

Olivaceous-green. Cilia olivaceous-cinereous. Wings with a pale chalybeous-white discal wavy line: forewing with a similar inner line. Front of head, palpi, and forelegs above whitish-ochreous; body and legs beneath, shaft of antennæ and vertex white.

Expanse $\frac{8}{10}$ inch.

Genus EUCROSTES.

Eucrostes, Hübner, Verz. bek. Schmett. p. 283 (1818-25).
Eucrostis, Lederer, Vers. Eur. Span. p. 25 (1853); Guénee, Phal. i. p. 366 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 565 (1861).
Hemithea (part), Duponchel, Boisduval.

Wings small: forewing triangular; cell half the length; first subcostal close to end, slightly touching the costal, second trifid, fifth from end of cell; discocellular inwardly-oblique, deeply concave, radial from near upper end; two upper medians

from end of cell, lower at one-sixth before the end: hindwing convex externally; cell half the length; two subcostals from end; discocellular bent above the middle, radial from the angle; two upper medians from a short distance beyond the cell, lower close to the end. Body rather stout; palpi porrect, small, not extending beyond the front, rather slender, laxly squamous, third joint very minute; antennæ in male bipectinated to one-third the tip, the branches stout and ciliated; legs slender, hind tibiæ in male with one pair of spurs.

Type, E. indigenaria.

EUCROSTES DISPARATA (Plate 196, Fig. 3).

Eucrostis disparata, Walker, Catal. Lep. Het. B. M. xxii. p. 567 (1861).
Geometra parvulata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1555 (1862).

Vivid green. Wings with a transverse very indistinct wavy oblique discal whitish line, and a marginal reddish lunular line; costa and marginal line indistinctly edged with pale yellow. Cilia reddish-cinereous. Shaft of antennæ, and vertex white; branches of antennæ brownish; front of head reddish; sides of palpi, and legs above reddish.

Expanse $\frac{5}{10}$ inch.

Genus ZAMARADA.

Wings semihyaline: forewing triangular; cell two-fifths the length; first subcostal close to end, second approximate, trifid, fifth from end of cell; discocellular concave, radial from the middle; two upper medians from end of cell, lower at one-third: hindwing convex externally, very slightly dentate; cell two-fifths the length; two subcostals from end; discocellular obliquely-concave; radial absent; two upper medians from end of cell, lower at nearly one-half. Body slender; palpi porrect, short, squamous, third joint very minute, pointed; antennæ broadly bipectinated and ciliated; legs slender, smooth, spurs very short.

ZAMARADA TRANSLUCIDA (Plate 197, Fig. 2, ♀).

Comibæna translucida, Walker, MS. (Brit. Mus. Coll.).

Wings semihyaline, glossy, olive-green, irridescent; with a broad purple-brown marginal band; the band on forewing quadrately excavated on its inner edge from the upper to lower median, the band on the hindwing waved anteriorly and quadrately excavated from upper to lower median; the bands with the inner bordering line black, the inner area with a few fine minute black strigæ, and traversed by a submarginal metallic-yellow sinuous line; a minute black dot at end of each cell. Cilia pale ochreous, alternated with purple-brown. Body pale purple-brown; legs ochreous-white.

Expanse ♂ $\frac{9}{10}$, ♀ $1\frac{2}{10}$ inch.

Genus COMIBÆNA.

Comibæna, Hübner, Verz. bek. Schmett. p. 284 (1818-25); Stephens, Illust. iv. p. 412 (1835); *id.* Catal. B. Lep. B. M. p. 170 (1850); Walker, Catal. Lep. Het. B. M. xxii. p. 568 (1861).
Phorodesma (part), Boisduval, Lederer, Guénee.

Forewing triangular; apex obtuse; cell half the length; first and second subcostals from end of cell, second with five branches, the sixth being thrown off from the second at some distance beyond its base; discocellular outwardly-oblique, radial from above the middle; the middle median close to end of cell, lower at two-fifths: hindwing short; exterior margin convex; cell half the length; two subcostals at half beyond the cell; discocellular outwardly-oblique, bent outward above the middle, radial from above the angle; two upper medians from end of cell, lower at one-fourth. Body slender; palpi porrect, projecting half beyond the head, squamous, hairy beneath, third joint cylindrical; antennæ broadly bipectinated to near tip, the branches finely ciliated; legs slender, squamous, hind tibiæ, with a tuft of scales extending beyond the tip, with four spurs.

Type, C. bajularia.

COMIBÆNA DISPANSA.

Comibæna dispansa, Walker, Catal. Lep. Het. B. M. xxii. p. 574 (1861), ♀.

Green. Wings with a silvery-white purple-red bordered narrow marginal band, which is slightly dilated and prolonged from the angle of the posterior margin on the forewing: forewing with the costal border silvery-white and minutely speckled with purple-red scales; a red-bordered silvery-white spot at upper end of cell and a smaller spot at its lower end; a small red-speckled spot also below end of cell on the hindwing. Body above green; body and legs beneath white.

Expanse $\frac{8}{10}$ inch.

COMIBÆNA PANNOSA (Plate 195, Fig. 1, 1*a*, ♂ ♀, 1*b* larva).

Comibæna devexata,* (var.), Walker, Catal. Lep. Het. B. M. xxii. p. 574, ♂.

Green. Wings with traces of a paler sinuous discal line ending on the posterior margin of each wing in a purplish-red point; a slender dentated purple-red marginal line; a similar-coloured grey-scaled large wavy-bordered oval patch at the posterior angle of forewing and a smaller triangular patch at apex of hindwing, the patch on forewing of male pale centred; forewing with the costal edge whitish and speckled with red; a minute blackish dot at end of each cell. Cilia with purplish-red points. Shaft of antennæ and vertex white; front of head, palpi and forelegs above ochreous-brown; body, palpi and legs beneath white; abdomen above purplish-red, with whitish bands.

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* The true *C. devexata* is figured on Plate 197, Fig. 5, from a drawing of the type specimen in the Saundersian Collection. It is quite a distinct species, and is found only in N.E. India.

Larva with 10 legs; slender, twig-like; green; spiracles black; 2nd and 12th segment with a pointed prominence; head and legs reddish. Pupa green; abdominal segments minutely black-speckled.

"Feeds on Loranthus" (*Thwaites*).

COMBIÆNA DIVAPALA (Plate 195, Fig. 2, ♀ 2*a* larva).

Comibæna divapala, Walker, Catal. Lep. Het. B. M. xxii. p. 575 (1861), ♀.

Dark green. Costal border, a broad patch at the posterior angle, and an angulated white-bordered broad marginal band on the hindwing pale ferruginous, each thickly speckled with dark brown. Cilia pale ferruginous and brown-speckled. Forewing also with a transverse discal sinuous indistinct white line, the lower end of which borders the posterior patch; two submarginal rows of small ferruginous-white points, a cluster of greyish scales at end of the cell; and at base of the hindwing a cluster of white scales. Thorax, vertex, and front of head green; abdomen pale ferruginous and brown-speckled; tip of palpi, and bands on fore and middle legs ferruginous; body and legs beneath white.

Expanse $1\frac{2}{10}$ inch.

Larva with 10 legs, looped, short; the segments subdorsally protuberant; 12th segment with a conical protuberance; colour olivaceous-green, anterior and posterior segments purplish-brown. Pupa greenish-brown, thickly covered with minute purple-brown speckles.

"Feeds on Myrtus" (*Thwaites*).

COMIBÆNA SEMIALBA (Plate 196, Fig. 1, ♀, 1*a* larva).

Comibæna semialba, Walker, Catal. Lep. Het. B. M. xxii. p. 601 (1861).

Dark green: forewing with a white dentated discal fascia, and a submarginal dentated line, the points of which extend to end of the veins; marginal dots dark green; costal border blotched with purplish cinereous-brown scales; a slight subbasal fascia composed of white scales: hindwing with the outer half white, encompassing a discal series of conical green spots and a submarginal line; marginal spots greenish-black, cilia whitish. Thorax green; head brown; abdomen and legs whitish.

Expanse $1\frac{1}{3}$ inch.

Larva with 10 legs; 2nd, 3rd, and 5th segment with short subdorsal protuberances, and 7th and 8th segment with longer pointed protuberances, the posterior segment with a point; colour olive-green, brown-speckled, anterior and posterior segments pale purplish-brown; a double brown line along the back. Pupa greenish, thickly covered with minute purple-brown speckles.

"Feeds on Loranthus" (*Thwaites*).

COMIBÆNA BIPLAGIATA.

—— *biplagiata*, Walker, MS. Coll. Brit. Mus.

Green: forewing with a transverse angulated antemedial white line, a postmedial line, and a submarginal lunular line, the two former lines bent outward below the median, and the outer line between upper and middle median; a white line also extending from the angle of inner to discal line, and the veins between the discal and outer line also white; posterior angle purplish-red with black speckles: hindwing with a white discal line, which is bent outward at the discocellular and joins a wavy submarginal line; a large purplish-red black-speckled patch at the apex, and a smaller one at anal angle. Thorax and abdomen with white bands; shaft of antennæ, vertex, palpi, legs and body beneath white; front of head partly green and white; fore tibiæ with a brown-speckled band.

Expanse $1\frac{2}{10}$ inch.

Allied to *C. partita*, Walker.

Genus BERTA.

Berta, Walker, Catal. Lep. Het. B. M. xxvi. p. 1621 (1862).

Male: forewing rather short, costa arched, exterior margin very slightly oblique; cell less than half the length; first subcostal from end of cell, five-branched, the sixth also from the end; discocellular outwardly-oblique, bent above the middle, radial from the angle; two upper medians from end of cell, lower at one-third: hindwing short, broad; exterior margin sinuous, angular; cell less than half the length; two subcostals at one-fourth from beyond the cell; discocellular outwardly oblique, bent above the middle, radial from the angle; two upper medians a short distance beyond end of cell, lower near the end. Body slender; palpi porrect, slender, second joint extending beyond the head, third joint linear, less than half length of second; antennæ broadly bipectinated to half the length, the branches long, ciliated; legs smooth, slender, hind tibiæ thickened, with four slender spurs.

BERTA CHRYSOLINEATA (Plate 196, Fig. 4).

Berta chrysolineata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1621 (1862).

Olive-green. Wings with a basal cluster, a medial, submarginal, and a marginal row of irregular-shaped large white spots. Cilia alternated with white. Abdomen with whitish bands; vertex white; head, palpi above and forelegs brownish; body and legs beneath white.

Expanse 1 inch.

BERTA GAVISSIMA (Plate 196, Fig. 6, ♂).

Comibæna gavissima, Walker, Catal. Lep. Het. B. M. xxii. p. 575 (1861).

Pale green. Wings crossed by three basal, two submarginal, and a marginal

row of white dentate spots, and a narrow medial zigzag band, which is absorbed at the costal end in a large yellowish-bordered purplish patch, and is posteriorly bordered by purplish-red, this colour also bordering the band across the hindwing. Cilia green, alternated with white. Abdomen above with white spots; thorax green; vertex and front of head partly green and white; palpi, legs, and body beneath white; forelegs and tarsi with brown bands.

Expanse $1\frac{2}{10}$ inch.

Genus MAXATES.

Forewing triangular; exterior margin acutely dentated; cell two-fifths the length; first subcostal close to end, second from the end, quadrifid, sixth also from the end; discocellular inwardly-oblique, bent above the middle, concave below, the radial from angle; two upper medians from a short distance beyond end of cell, lower at nearly half before the end: hindwing very short, prolonged hindward, exterior margin acutely dentated, somewhat caudate in the middle; cell nearly half the length; two subcostals at one-fifth beyond the cell; discocellular outwardly-oblique, bent above the middle, radial from the angle; two upper medians at one-fourth beyond the cell, lower at one-third before the end. Cilia ample. Body slender; palpi porrect, second joint extending two-thirds beyond the head, third cylindrical, one-third the length of second in male, nearly as long as second in female; antennæ very broadly bipectinated to one-third the tip, branches ciliated; legs slender, hind tibiæ with two pairs of slender spurs.

MAXATES CÆLATARIA (Plate 196, Fig. 2♂, 2a♀).

Thalassodes cælataria, Walker, Catal. Lep. Het. B. M. xxii. p. 552 (1861), ♂.

Dark green: forewing with a testaceous costal band, which is angled and dentated on the middle of its lower edge; a testaceous patch at the posterior angle: hindwing with a narrow apical and broad anal testaceous patch. The band and patches with a few short transverse black strigæ. Both wings crossed by a slender white sinuous discal line, that on the hindwing broadly dilated at its costal end; marginal line slender, black. Cilia testaceous. Thorax green; abdomen testaceous; shaft of antennæ and vertex testaceous-white; front of head, tip of palpi, and forelegs above ochreous-brown; body and legs beneath ochreous-white.

Expanse ♂ $1\frac{5}{10}$, ♀ $1\frac{7}{10}$ inch.

Genus AGATHIA.

Agathia, Guénee, Phal. i. p. 380 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 589 (1861

Wings broad: forewing rather short, triangular; cell less than half the length; first subcostal at one-sixth, second from angle close to end, quadrifid, sixth from the end; discocellular concave, radial from above the middle; the middle median

very close to end, lower at two-fifths: hindwing short, exterior margin dentate, subcaudate; cell nearly half the length; two subcostals from the end; discocellular concave, radial from above the middle; two upper medians from end of cell, lower at one-third. Body slender, abdomen with small dorsal tufts; palpi slender, obliquely-porrect, extending some distance beyond the head, third joint about half length of the second in male, nearly as long as the second in female; antennæ simple; legs smooth, hind tibiæ with two pairs of spurs.

Type, A. lycænaria.

AGATHIA LÆTATA (PLATE 197, FIG. 1, 1*a*, ♂ ♀, 1*b* larva).

Phalæna lætata, Fabricius, Ent. Syst. iii. 2, p. 164 (1794).
Agathia catenaria, Walker, Catal. Lep. Het. B. xxii. p. 590 (1861).

Bright green. Wings with a broad purplish-red wavy-bordered marginal band, enclosing a green indentated apical patch on the forewing and an oval patch on middle of the exterior margin of hindwing; the band with a few slender indistinct black flecks and traversed by a parallel indistinct cinereous line; the subcaudal angle dark red. Costal border of forewing and the extreme base also purplish-red. Cilia pale purplish-red with darker vein points. Front of thorax green; hind part of thorax, abdomen above, shaft of antennæ, vertex, front of head, tip of palpi, and fore tibiæ above purplish-red; palpi and body beneath whitish; legs brownish-white.

Expanse ♂ ♀ $1\frac{3}{10}$ inch.

Larva with 10 legs; looped; with prominences on 2nd and 12th segments; colour green. Pupa yellowish-green above, green beneath, abdominal segments black-speckled.

"Feeds on Nerium oleander" (*Thwaites*).

AGATHIA INTERCISSA.

Agathia intercissa, Walker, Catal. Lep. Het. B. M. xxii. p. 592 (1861).

Vivid green: forewing with a short basal, an interrupted medial and a discal pale purplish-red dentated band, and a narrow marginal dentated line; costal border and a spot at the apex also purplish-red: hindwing with a discal dentated interrupted band, a narrow marginal line with blackish outer points, and a large dark purple-red subcaudal spot. Cilia whitish with purplish-red spots. Thorax and base of abdomen green; tip of abdomen, vertex, front of head, tip of palpi, and forelegs above purplish-red; palpi and body beneath and legs white.

Expanse $1\frac{4}{10}$ inch.

AGATHIA MAGNIFICA (Plate 197, Fig. 4, ♀).

Agathia magnifica, Moore, Proc. Zool. Soc. 1879, p. 416.

Bright green. Wings with a purplish-red undulated bordered marginal band, enclosing a large indentated oval apical green patch and three separated lower marginal spots on the forewing, and on the hindwing a large oval medial marginal green patch; the subcaudal angle with a white spot; the band inwardly traversed by a slight grey line: forewing also with a transverse medial undulated uniformly narrow purplish-red band and a short band at the extreme base; costal border also purplish-red. Cilia purplish-cinereous with darker vein points. Thorax above, and dorsal bands on abdomen green; vertex, antennæ, front of head, abdomen at sides and tip, palpi and forelegs above purplish-red; palpi and body beneath and legs brownish-white.

Expanse ♀ $1\frac{8}{10}$ inch.

AGATHIA HEMITHEARIA (Plate 197, Fig. 3, ♀).

Agathia Hemithearia, Guénee, Phal. i. p. 381 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 590 (1861).

Bright green. Wings with a very broad purplish-red marginal band, which is indentated on its inner edge below the radial and below the lower median, and encloses an indentated quadrate apical green patch and two small paler spots below it on the forewing, and on the hindwing a large oval medial marginal green patch; a white streak at subcaudal angle: forewing also with a transverse medial deeply undulated narrow purplish-red band, a short basal band, and a costal band. Thorax, and dorsal spots on base of abdomen green; vertex, antennæ, front of head, tip of palpi, forelegs and abdomen above purplish-red; palpi and body beneath, and legs brownish-white.

Expanse ♂ $1\frac{3}{10}$, ♀ $1\frac{9}{10}$ inch.

Family PALYADÆ.

Wings well developed, smooth; cilia short. Antennæ very long and slender, rarely ciliate or pectinate; palpi well developed, ascending. Body slender, abdomen long, smooth; legs long, very slender, hind tibiæ not thickened.

Larva unknown.

Genus EUMELEA.

Eumelea, Westwood, Duncan's, Nat. Libr. Exot. Moths, p. 215 (1841); Guénee, Phal. i. p. 391 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 609 (1868).

Ametris (part), Hübner, Verz. Bek. Schmett. p. 303.

Forewing elongated, triangular; costa somewhat arched towards the end, apex acute, slightly falcate, exterior margin slightly oblique; cell half the length; first subcostal at one-eighth, touching the costal near its end, second approximate, anas-

tomosed to middle of the first, third from end of cell, trifid, sixth also from the end; discocellular bent in the middle, concave at each end, radial from the angle; middle median close to end, lower at one half: hindwing triangular, apex convex, exterior margin very oblique, anal angle prominent; cell two-fifths the length; two subcostals at one-fifth beyond end of the cell; discocellular undulated, radial from the middle; the middle median close to end of cell, lower fully one-half. Cilia short. Body long, slender; palpi slightly ascending, rather broad and compressed, clothed with short lax hairs above and beneath, third joint short, linear in male, slender in female; antennæ very long and slender, smooth in both sexes; legs long, very slender, tarsi very long, fore tibiæ with a small tuft, hind tibiæ of male finely pilose beneath, spurs very long and slender.

Type, E. rosalia.

EUMELEA LUDOVICATA (Plate 198, Fig. 1, 1*a*, ♂ ♀).

Eumelea Ludovicata, Guénee, Phal. i. p. 393 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 610 (1861).

Eumelea rosalia, Westwood, Duncan's, Nat. Libr. Exot. Moths, p. 215, pl. 29, f. 4 (*nec.* Cramer).

Golden yellow. Wings in male numerously covered with purple-red short transverse strigæ, which are thickest and form more or less confluent blotches on the basal and medial areas; a more prominent purple-red discal fascia, the veins crossing which are lined with purplish-black; sometimes there is also a less defined similar medial fascia; the costa of forewing also with short purple-black strigæ; marginal line dark purple-red, cilia paler. Female with the strigæ more uniformly disposed and narrower throughout; the forewing with the discal, medial, and a less apparent antemedial fascia. Collar, a line on the vertex, front of head, palpi above, speckles on femora and tibiæ above, and on abdomen, and antennæ above purple-red.

Expanse 2 to $2\frac{2}{8}$ inches.

EUMELEA VULPERARIA (Plate 198, Fig. 2, ♂).

Phal. Geometra vulperaria, Cramer, Pap. Exot. iv. p. 245, pl. 400, f. O. P. (1782).

Ametris vulperaria, Hübner, Verz. bek. Schmett. p. 303.

Eumelea vulperaria, Guénee, Phal. i. p. 393; Walker, Catal Lep. Het. B. M. xxii. p. 611.

Phalæna gravidata, Fabricius, Ent. Syst. iii. 2, p. 175 (1794).

Male and female. Olivaceous-ochreous. Wings with numerous uniformly disposed slender short transverse purple-red strigæ: forewing crossed by three more or less distinct purple-red narrow bands, and hindwing with a similar narrow medial band and a broader submarginal strigose fascia; the extreme apex of hindwing

bright yellow; marginal line and cilia purple-red. Body and legs with purple-red speckles.

Expanse $1\frac{7}{8}$ to 2 inches.

EUMELEA AURELIATA (PLATE 198, FIG. 4, 4*a*, ♂ ♀).

Eumelea aureliata, Guénee, Phal. i. p. 394, pl. 22, fig. 6 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 611 (1861).

Golden yellow. Wings with numerous irregularly-disposed golden-red speckles, which are more or less flecked with purple; crossed by a medial and discal more or less formed dark purple blotched broken fascia with accompanying darker vein streaks; the blotched portions on the forewing generally larger towards the upper end of discal and lower end of the medial fascia, and on the hindwing at upper end of the medial fascia; similar dark subbasal blotches on both wings; marginal line dark purple. cilia paler. Body and legs with dark purple fleckles.

Expanse ♀ $1\frac{7}{8}$, ♂ $2\frac{2}{5}$ inches.

EUMELEA FLAVATA (PLATE 198, FIG. 3, ♀).

Golden-yellow. Wings with numerous regularly-disposed golden-red speckles: forewing crossed, as in *E. vulperaria*, by three, and hindwing by two purple-brown bands, the outer band on both wings being broken and of a more purple-red colour, especially that on the hindwing, and with darker vein streaks; marginal line golden-red; cilia pale purple. Body and legs with golden-red speckles.

Expanse 2 inches.

Genus COCYPARIS.

Cocyparis, Walker, Catal. Lep. Het. B. M. xxvii. p. 1572 (1862).
Ballatha, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1214 (1865).

Forewing somewhat oval; costa arched, apex convex; a small dense compact tuft of metallic black scales on middle of the posterior margin; cell more than half the length; first subcostal at two-fifths, second at one-fifth, bifid, fourth from angle close to end, bifid, the fourth anastomosed to third from near its base to near its end, sixth from end of cell; discocellular concave, radial from near lower end; middle median close to end, lower at fully two-fifths: hindwing somewhat oval, apex and exterior margin convex; cell narrow, two-fifths the length; two subcostals from end of cell; discocellular bent in the middle; radial from below the angle; two upper medians from extreme end, lower at fully two-fifths. Body rather slender, abdomen smooth; palpi ascending, in male rather slender, second joint reaching above the vertex, third joint rather longer than second, very slender and clavate; palpi in female longer and more slender; antennæ slender, finely biciliated in male, simple in female; legs squamous, slender, spurs long.

Note.—This genus is placed here with doubt. It is probably a Lithosiid

COCYPARIS INSOLITATA (Plate 198, Fig. 5, *5a*, ♂ ♀).

Cocyparis insolitata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1572 (1862).
Ballatha atrotumens, Walker, Catal. Lep. Het. B. M. xxxiv. p. 1215 (1865).

Forewing greyish ochreous-brown, the base, apex, middle of costa, and posterior margin more ochreous; the basal area, an angular transverse discal fascia, a cell streak, and an oblique subapical streak, and the cilia washed with metallic silvery-grey; a prominent black oval apical spot, which is yellow-bordered and traversed by a yellow line; a raised tuft of metallic black scales on middle of the posterior margin; hindwing ochreous, with a clouded black discal patch. Thorax, head, tip of palpi, and forelegs above greyish ochreous-brown; abdomen, palpi, middle and hindlegs ochreous.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{5}{10}$ inch.

Family CYCLOPHORIDÆ.

Ephyridæ, Guénee, Phal. i. p. 402; Walker, Catal. Lep. Het. B. M. xxii. p. 622.

Wings small, extended during repose; alike in colour, and markings, which generally consist of two remote lines of points and of a discal ocellus. Proboscis moderately long; palpi conspicuous, third joint filiform, very distinct, often long; antennæ of male generally pectinated to near the end; legs rather long; hind tibiæ with only one pair of spurs.

Larva cylindrical, elongated, without protuberances; head rather large, flattened and slightly indented. Lives exposed on trees. Pupa truncate in front, suspended by a silken thread at the tail and by a girdle round the body.

Genus CYCLOPHORA.

Cyclophora, Hübner, Tentamen, p. 2 (1806); Stephens, Catal. ii. p. 127 (1829).
Leucophthalmia et *Codonia*, Hübn., Verz. bek. Schmett. p. 302 (1825-7).
Ephyra * Duponchel, Lep. Fr. vii. 2, p. 108 (1829); *id.* viii. 1, p. 20 (1830); Steph., Illust. Haust. iii. p. 198 (1831); Curtis, Brit. Ent. fol. 447 (1834); Guén., Phal. i. p. 405; Walker, Catal. Lep. Het. B. M. xxii. p. 624.
Zonosoma, Lederer, Vers. Eur. Span., pp. 10, 30 (1853).

Male. Forewing triangular, apex acute, exterior margin very slightly angular in the middle; cell half the length; first subcostal at two-fifths, quadrifid, fifth at one-fifth, very slightly touching second near its base, sixth from end of cell; discocellular recurved, radial from middle; the middle median about one-sixth, lower at two-fifths: hindwing short, exterior margin slightly angular in the middle; cell half the

* Used in 1809 for a genus of Acalephæ.

length, broad; two subcostals from the end; discocellular nearly straight, radial from middle; two upper medians from end of cell, lower at two-fifths. Body short; palpi porrect, small, slender, pointed at tip; antennæ bipectinated and ciliated to two-thirds the tip; legs long, slender, middle and hind tibiæ with one pair of slender spurs.

Type, C. pendularia.

CYCLOPHORA PENDULARIA.

Phal. Geometra pendularia, Linn. Faun. Suec. p. 327 (1761); Clerck, Icones, pl. 7, f. 5.
Ephyra pendularia, Duponchel, Lep. Fr. viii. p. 35, pl. 172, f. 5; Stephens, Illust. Haust. iii. p. 199.
Cyclophora pendularia, Hübner, Tentamen, p. 2 (1806); Stephens, Catal. ii. p. 127.
Zonosoma pendularia, Lederer, Vers. Eur. Span. pp. 10, 30, fig. 6 (1853).
Ephyra vusarmana, Walker, Catal. Lep. Het. B. M. xxii. p. 637 (1861), ♀.

Whitish cinereous. Wings very sparsely speckled with very indistinct slender black strigæ; a white spot at end of each cell, which is reddish-bordered on the forewing, and black-bordered on the hindwing: forewing crossed by a curved antemedial and a recurved discal row of black points, and a marginal row of points: hindwing with a discal and marginal row of black points.

Expanse 1 inch.

The specimen from Ceylon in the British Museum collection, named *Ephyra vusarmana* by Mr. Walker, is identical with European specimens of *C. pendularia.*

CYCLOPHORA ABHADRACA (Plate 199, Fig. 3, 3*a*, larva).

Ephyra Abhadraca, Walker, Catal. Lep. Het. B. M. xxii. p. 636 (1861), ♀.

Wings pale purplish-red; cilia yellow; a pale whitish irregular submarginal patch, which is traversed by an undulating purple-red speckled line; a purple-red cell spot, which is largest and white-centred on the hindwing. Costal border and base of forewing mostly overspread with yellowish cinereous. Body reddish.

Expanse $\frac{9}{10}$ inch.

Larva long, very slender; looped; with 10 legs; colour purple-black; some minute white spots on anterior segments, and an interrupted slender lateral line. Pupa slender, purplish, variegated with green segmental bands and longitudinal black lines, and black stripes along wing cases.

"Feeds on Eugenia" (*Thwaites*).

CYCLOPHORA INVEXATA (Plate 199, Fig. 2, ♂).

Epione invexata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1497 (1862), ♂.
Ephyra monochromata, Walker, *id.* p. 1754 (1862), ♂.

Yellow. Forewing with a faint trace of an angular discal pale brownish fascia. A small white-centred brown cell spot which is indistinct on the forewing. Shaft of

antennæ and vertex pale brownish-ochreous; front of head, palpi, and forelegs above dark ochreous-brown.

Expanse 1 inch.

CYCLOPHORA QUIETA (Plate 199, Fig. 1, 1*a*, ♂ ♀.)

Ephyra quieta, Swinhoe, P. Z. S. 1885, p. 856, pl. 56, f. 1.

Male and female. Duller yellow than *C. invexata*. Cilia bright yellow. Both wings thickly covered with pale brownish-ochreous strigæ, and with a recurved discal pale brownish fascia, which in the female is outwardly bordered by a row of brown points; cell spot white-centred.

Expanse, ♂ 1, ♀ $1\frac{2}{10}$ inch.

This may probably be a variety of *C. invexata*.

Genus ANISODES.

Anisodes, Guénee, Phal. i. p. 415 (1857); Walker, Catal. Lep Het. B. M. xxii. p. 639 (1861).

Male. Forewing triangular, more or less acute at apex, exterior margin even; cell half the length; first subcostal nearly half before end of cell, second at one-fourth, bifid, slightly touching first near its base, fourth contiguous to base of second, and slightly touching it above its base, fifth from end of cell; discocellular very slightly oblique, radial from above the middle; the middle median close to end of cell, lower fully one-third: hindwing short, broad, triangular, exterior margin very oblique, convex, sometimes slightly sinuous; cell nearly half the length; first subcostal close to end; discocellular outwardly oblique, radial from above middle; the middle median very close to end, lower at one-third. Body moderately stout; palpi short, squamous beneath, third joint short, obtuse; antennæ minutely bipectinated to two-thirds the length; legs squamous, hind tibiæ short, furnished with a dense tuft of hairs, spurs concealed; middle tibiæ with a pair of slender unequal spurs (*A. lateritiaria*).

ANISODES OBRINARIA (Plate 199, Fig. 4*a*, ♀).

Ephyra obrinaria, Guénee, Phal. i. p. 414 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 636.
Anisodes obliviaria, Walker, Catal. Lep. Het. B. M. xxii. p. 643 (1861), ♀.

Pale violaceous brownish-ochreous. Wings crossed by a very indistinct pale dusky cinereous zigzag medial fascia, a discal series of minute black points, and a marginal row of points: forewing also with a subbasal series of points, and a similar spot at end of cell: hindwing with a prominent white-centred black-bordered rounded spot at end of cell. Base of antennæ and vertex in male whitish; front of head, palpi and forelegs above, and hind tibial tuft in male purplish-red.

Expanse ♂ ♀ $1\frac{2}{10}$ inch.

ANISODES OVISIGNATA.

Anisodes responsaria, Var. Walker, Catal. Lep. Het. B. M. xxii. p. 648, (1861), ♂.

Male and female. Testaceous-yellow, paler beneath. Wings thickly and diffusedly covered with pale cinereous-purple speckles; crossed by a very indistinct similar coloured medial fascia, an antemedial and postmedial curved series of distinct black points, some less defined submarginal points, and a marginal row of points: forewing also with a black point in middle of cell, a larger but less distinct point at upper end, and a small point at its lower end: hindwing with a distinct elongate black-bordered white spot across end of cell. Body speckled with cinereous-purple scales; front of head reddish.

Expanse, ♂ $1\frac{4}{10}$, ♀ $1\frac{3}{10}$ inch.

ANISODES CARNEARIA (Plate 199, Fig. 6, ♀.)

Anisodes carnearia, Walker, Catal. Lep. Het. B. M. xxii. p. 644 (1861), ♀.

Deep ferruginous-red. Marginal points absent. Forewing crossed by an antemedial, medial, and discal very indistinct dusky-brown zigzag denticulated diffuse line; a minute white-centred blackish cell spot: hindwing with a similar denticulated discal line, and a well-formed white-centred cell spot. Shaft of antennæ and vertex white; front of head, palpi and forelegs above ferruginous-red.

Expanse $1\frac{2}{10}$ inch.

ANISODES PATRUELIS (Plate 199, Fig. 10, ♀).

Female. Near to *A. carnearia*. Larger; cinerescent ferruginous-red. Wings crossed by a very indistinct dusky medial zigzag fascia, a discal and marginal row of black points; a minute white-centred spot at end of each cell: forewing also with a subbasal series of black points. Shaft of antennæ and vertex deep brownish-ochreous; front, palpi and forelegs above dark reddish-brown.

Expanse $1\frac{5}{10}$ inch.

"Punduloya" (*E. E. Green*).

ANISODES CALIGATA (Plate 199, Fig. 4, ♂).

Anisodes caligata, Walker, Catal. Lep. Het. B. M. xxv. p. 1584 (1861), ♀.

Pale brownish-ochreous. Wings thickly speckled with indistinct pale purplish strigæ; crossed by a discal and marginal row of minute black points: forewing with a small blackish cell spot, and a submarginal series of black points: hindwing with a distinct black-bordered white cell spot. Shaft of antennæ and vertex whitish; front of head, palpi and forelegs above reddish.

Expanse 1 inch.

ANISODES PALLIDA (Plate 201, Fig. 11).

Near to *A. caligata*. Whitish-cinereous. Wings crossed by a narrow antemedial, medial, and a submarginal pale greyish-brown zigzag band, interspaced by a submarginal, discal, and marginal series of minute black points. A minute black cell spot on forewing, and a white-centred ringlet on hindwing. Palpi above brownish.

Expanse $\frac{9}{10}$ inch.

ANISODES NEBULOSATA (Plate 199, Fig. 5, ♀).

Anisodes nebulosata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1583 (1862), ♀.

Pale purplish yellowish-cinereous. Both wings with an indistinct diffuse pale cinereous-brown blotched irregular medial and discal band: forewing with a narrow similar antemedial band, and a darker lunule at end of cell.

Expanse 1 inch.

ANISODES ACUTA (Plate 215, Fig. 9).

Female. Pale ferruginous-red. Forewing produced and acute at the apex. Both wings with a very indistinct discal series of minute slender black points, and a marginal row of points; a dot at end of cell. Shaft of antennæ and vertex whitish; front, palpi, and forelegs above red.

Expanse 1 inch.

"Dickoya" (*E. E. Green*).

ANISODES SUBROSEATA.

Anisodes subroseata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1583 (1862), ♀.

Reddish-ochreous. Wings numerously covered with rosy-red speckles, which are more thickly disposed across the outer area, and there mostly form confluent ill-defined fasciæ. Body rosy speckled; fore and middle legs reddish-ochreous.

Expanse $\frac{7}{8}$ inch.

ANISODES IGNORATA.

Anisodes ignorata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1584 (1862), ♀.

Ferruginous-brown. Wings without any markings except the brown very minute marginal points, and a raised lunular streak at end of each cell. Front of head and palpi ferruginous-red; legs above pale ferruginous-brown.

Expanse 1 inch.

ANISODES ARENOSARIA (Plate 202, Fig. 1, ♀).

Female. Whitish-ochreous. Wings numerously flecked with short reddish-ochreous strigæ, some of which are confluent, and form an ill-defined irregular zigzag transverse medial fascia, and less defined submarginal fasciæ; an indistinct discal row of blackish points, and a marginal row of points; cell spot reddish-ochreous. Front partly brown and white; palpi and forelegs above ochreous-brown.

Underside with the costal border of forewing broadly bordered with pale reddish-ochreous; discal points distinct.

Expanse $1\frac{4}{10}$ inch.

"Dickoya" (*E. E. Green*).

Has much the appearance of the *Acidalia extimaria*, Walker, figured on Plate 204, fig. 5.

Genus SYNEGIA.

Synegia, Guénee, Phal. i. p. 423 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 653 (1861).

Male. Forewing rather short, triangular; cell half the length; first subcostal at one-fifth, touching the costal near end, second approximate, quadrifid, sixth from the end; discocellular slightly concave, radial from the middle; the middle median close to end, lower at two-fifths: hindwing short, triangular, apex convex; cell nearly half the length, broad at its base; first subcostal before end of cell; discocellular outwardly-oblique, concave, radial from the middle; the middle median close to end, lower nearly half. Body long, slender, apex tufted; frontal tuft pointed; palpi obliquely ascending, projected beyond the front, very laxly squamous beneath, third joint conical; antennæ bipectinated; legs long, slender, smooth, middle tibiæ with a pair of long slender spurs, hind tibiæ with two pairs of long spurs.

Type, S. botydaria.

SYNEGIA IMITARIA.

Anisodes imitaria, Walker, Catal. Lep. Het. B. M. xxii. p. 643 (1861), ♀.
Anisodes obrimaria, Walker, *id.* xxii. p. 644 (1861), ♂.

Pale ochreous-yellow. Wings distinctly speckled with brownish-ochreous; the speckles partly confluent across the outer border and there form a submarginal more or less blotched fascia; marginal points blackish; a blackish dot at end of each cell: forewing with a transverse sinuous greyish-ochreous bordered antemedial line and a prominent brownish discal line: hindwing with a similar discal line. Costa of forewing chalybeous brownish-ochreous, with darker speckles. Thorax, head, and palpi with brownish-ochreous bands; abdomen with dorsal yellow-centred bands; collar chalybeous brownish-ochreous; forelegs ochreous.

Expanse $1\frac{2}{3}$ inch.

Genus BORBACHA.

Near to Synegia. Both wings longer and narrower. Exterior margin of hindwing sinuous. Venation similar. Antennæ of male broadly pectinated on the outer side only, the branches stout; palpi much narrower, smoothly clothed, third joint slender, pointed.

Type, B. pardaria.

BORBACHA PARDARIA (Plate 199, Fig. 9, ♂).

Anisodes pardaria, Guénee, Phal. i. p. 420 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 647.

Yellow. Wings very sparsely speckled with short red strigæ; crossed by an antemedial and an inwardly-oblique discal reddish-cinereous zigzag band; the discal band on forewing being composed of more or less broken lunular parts; some similar coloured subapical angular streaks on forewing, and short strigæ on the costal border. A small black spot at end of each cell. Body with reddish bands.

Expanse $1\frac{5}{10}$ inch.

Family IDÆIDÆ.

Acidalidæ, Guénee, Phal. i. p. 422; Walker, Catal. Lep. Het. B. M. xxii. p. 651.

Wings small, or of medium size, smooth, generally entire; alike in colour and markings: forewing triangular; hindwing rounded, or with an angle on the exterior margin. Body generally slender; proboscis distinct; palpi generally small; antennæ rather short, pubescent, or finely pectinated in the male, never plumose; abdomen not crested; legs smooth; hind tibiæ of male often incrassated, and with aborted tarsi; one or two pairs of spurs in the female.

Larva slender, cylindrical, or keeled.

Lives hidden under low plants.

Pupa in a cocoon amongst leaves or in the earth.

Genus POMASIA.

Pomasia, Guénee, Phal. i. p. 427 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 656 (1861).

Forewing elongate, broad externally, apex and exterior margin convex; cell more than half the length; first subcostal nearly one-third before end of cell, quadrifid, fifth curved upward from end and slightly touching second near its base; discocellular outwardly-oblique, radial from the middle; the middle median from angle close to end, lower nearly one-third: hindwing very short, exterior margin convex, waved; cell half the length; costal joined to subcostal from near base to near end of cell; two subcostals at one-fifth beyond end of cell; discocellular outwardly concave, radial from middle; the middle median from angle close to end, lower at one-third. Body slender, with well-developed slender anal tuft in male; palpi porrect, long, squamous, second joint extending more than half beyond the head, third joint about half its length, oval; legs long, smooth; middle tibiæ with a pair and hind tibiæ with two pairs of slender unequal spurs; antennæ setaceous.

(*P. psylaria.*)

POMASIA PSYLARIA (Plate 200, Fig. 2, ♂).

Pomasia psylaria, Guénee, Phal. i. p. 428 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 656 (1861).

Ochreous-red. Wings crossed by four silvery greyish-white angulated blackish-bordered bands, and a marginal series of dentate spots along the veins; the bands terminating before the costa, which is black streaked; between the bands are some contiguous dentate silvery marks; outer margin with some black marks which here and there extend across the cilia. Body with blackish-bordered silvery-white bands; front of head and bands on palpi white; legs pale ochreous, forelegs with blackish bands.

Expanse $1\frac{1}{10}$ inch.

Genus HYRIA.

Hyria, Stephens, Catal. Brit. Ins. ii. p. 150 (1829); *id.* Illust. Haust. iii. p. 292 (1831); Guénee, Phal. i. p. 428 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 658.

Eois (part), Hübner, Verz. bek. Schmett. p. 308.

Acidalia (part), Lederer, Vers. Eur. Span. pp. 9, 27.

Forewing moderately long, triangular; apex obtuse, exterior margin slightly convex; cell more than half the length; first subcostal at nearly half, second at one-fifth, quadrifid; discocellular slightly concave, radial from the middle; the middle median from angle near end, lower at one-fourth: hindwing short, convexly angular in the middle; cell broad, fully half the length; two subcostals at half length beyond the cell; discocellular slightly concave, radial from the middle; the middle median near end, lower nearly half before end. Cilia broad. Body short; palpi porrect, short, and laxly squamous; antennæ serrated, the points ciliated in male; setaceous in female; legs slender, hind tibiæ with one pair of long apical spurs.

Type, H. auroraria.

HYRIA MARCIDARIA.

Hyria marcidaria, Walker, Catal. Lep. Het. B. M. xxii. p. 663 (1861).

Yellowish, shining, silky. Wings crossed by oblique antemedial, medial, and postmedial rosy-red undulating nearly parallel diffuse lines; exterior margin also suffused with rosy-red. Head, palpi, and forelegs rosy-red.

Expanse $\frac{1}{2}$ inch.

Genus MICRÆSCHUS.

Micræschus, Butler, Ann. Nat. Hist. 1878, p. 402.

Wings small. Forewing rather narrow, apex pointed, exterior margin angular in middle: hindwing short, exterior margin angular in middle. Body short; palpi porrect, slender; antennæ minutely ciliated; legs smooth; hind tibiæ with two slender long spurs.

Type, M. elataria.

MICRÆSCHUS ELATARIA.

Hyria elataria, Walker, Catal. Lep. Het. B. M. xxii. p. 665 (1861).

Pale yellow. Wings with three or four irregular transverse rosy-speckled partly-confluent wavy bands, and a submarginal undulating lunular white line with minute black-speckled borders; exterior margin metallic black, diffused: forewing also with the costal border and an oblique stripe partly across the disc metallic black. Body red-speckled, thorax metallic black in front; palpi red; legs yellowish.

Expanse $\frac{4}{10}$ inch.

MICRÆSCHUS OBLATARIA (Plate 200, Fig. 6).

Hyria oblataria, Walker, Catal. Lep. Het. B. M. xxii. p. 665 (1861).

Wings covered with ochreous-red speckles, interspersed with a very few minute black scales; exterior border with a diffuse metallic black marginal lunular line: forewing with a transverse sinuous indistinct yellowish antemedial and postmedial line, and a slender interciliary line; costal border metallic black; a slight black spot at end of cell: hindwing with a similar yellowish discal line. Shaft of antennæ and vertex white; front of head and palpi reddish-ochreous; legs yellowish.

Expanse $\frac{5}{10}$ inch.

Genus ASTHENA.

Asthena, Hübner, Verz. bek. Schmett. p. 310 (1825-7); Stephens, Illust. Haust. IV. p. 414 (1835); *id*. Catal. B. Lep. B. M. p. 224 (1850). Guénee, Phal. i. p. 434. Walker, Catal. Lep. Het. B. M. xxii. p. 673.

Acidalia (part), Treit. Dup. Boisd. H. Sch.

Cidaria (part), Lederer.

Forewing short, triangular; cell half the length; first subcostal at one-sixth before end of cell, second from the end, quadrifid, slightly touching first above base of fifth, sixth also from the end; discocellular outwardly-oblique, concave, radial from above the middle; the middle median from angle close to end, lower at one-third: hindwing short, exterior margin angular below the apex and the middle; cell half the length; costal joined to subcostal to half its length; two subcostals at half beyond the cell; discocellular outwardly-oblique, concave, radial from above the middle; the middle median close to end of cell, lower at one-third. Body short; palpi porrect, slender, apex pointed; antennæ minutely pubescent; legs slender, hind tibiæ with two pair of short spurs.

Type, A. luteata.

ASTHENA SUNANDAVA (Plate 200, Fig. 4).

Pomasia Sunandava, Walker, Catal. Lep. Het. B. M. xxii. p. 657 (1861), ♀.
Cambogia æriferata, Walker, *id*. xxvi. p. 1588 (1862), ♀.

Light yellow: forewing crossed by eight silvery-washed cinereous-red more or

less broken wavy denticulated bands, which are partly confluent along the costal border; a darker spot at end of cell: hindwing with irregularly broken similar outer bands, a small spot at end of cell, one below its base, and a quadrate spot on middle of abdominal margin. Front of thorax, and bands on abdomen, silvery cinereous-red; tip of palpi red.

Expanse, ♂ 1, ♀ 1$\frac{1}{10}$ inch.

Genus PSEUDASTHENA.

Allied to Asthena. Outline of wings similar to *A. luteata*: forewing with the first subcostal five branched, the fifth being emitted from below at about one-third from its base, sixth from end of cell: hindwing with the subcostals and two upper medians at about one-fourth beyond end of the cell. Antennæ very broadly bipectinated to one-third the tip, the branches finely ciliated.

Type, P. lunulosa.

PSEUDASTHENA LUNULOSA (Plate 200, Fig. 5, 5a, ♂ ♀).

Deep yellow. Wings crossed by apparently eight cinereous purple-red lunular bands, of which the outer is submarginal and the thickest, those across the middle of forewing sometimes confluent; a darker spot at end of each cell. Front of thorax purple-red; shaft of antennæ and vertex white; front of head deep yellow.

Expanse ♂ ♀ $\frac{9}{10}$ inch.

PSEUDASTHENA DISSIMILIS (Plate 199, Fig. 7).

Light yellow. Forewing crossed by basal, subbasal, discal, and marginal brownish-ochreous lunular bands; the two middle bands broadest and dilated anteriorly: hindwing with narrower lunular bands. Thorax in front brownish-ochreous; head ochreous-yellow; palpi and legs light yellow.

Expanse $\frac{9}{12}$ inch.

PSEUDASTHENA MEMORATA (Plate 199, Fig. 8, ♀).

Pomasia memorata, Walker, Catal. Lep. Het. B. M. xxii. p. 657 (1861), ♀.

Yellow. Wings with several narrow slender denticulated red bands, of which the middle band is curved, diffused, and most prominent. Body with red bands.

Expanse ♀ $\frac{8}{10}$ inch.

PSEUDASTHENA RHODINARIA.

Hyria rhodinaria, Walker, Catal. Lep. Het. B. M. xxii. p. 666 (1861).

"Male. Rosy-red. Wings semihyaline; irregularly and more or less overspread with rosy-red, which chiefly prevails about the base and along the exterior border;

a black discal point on each wing. Antennæ white, pectinated; abdomen with pale yellow stripe.

"Expanse 8 lines."

In Coll. E. L. Layard.

PSEUDASTHENA GRATARIA (Plate 200, Fig. 3).

Ilyria grataria, Walker, Catal. Lep. Het. B. M. xxii. p. 663 (1861).
Acidalia pallicinctaria, Walker, *id.* xxvi. p. 1612 (1862).

Purple-red. Forewing somewhat cinereous basally. Wings crossed by three or four ill-defined discal yellow lunular bands; extreme outer border and cilia deep yellow. Shaft of antennæ and vertex pure white; front of head, and palpi ochreous-yellow.

Expanse $\frac{9}{10}$ inch.

Genus CRASPEDIA.

Craspedia, Hübner, Verz. bek. Schmett. p. 312 (1825-7).
Dosithea, Duponchel, Lep. Fr. vii. 2, p. 108 (1829); *id.* viii. 1, p. 43 (1830); *id.* Catal. Lep. Eur. p. 271.
Acidalia (part), Treitschke, Curtis, Lederer, Guénee, Walker.
Idæa (part), Treitschke.
Ptychopoda (part), Stephens.

Forewing with the apex more produced and exterior margin more oblique than in typical Idæa: hindwing comparatively longer, the exterior margin much dentated. Venation similar. Antennæ thicker, stronger biciliated.

Type, C. ornataria.

CRASPEDIA DELICIOSARIA (Plate 201, Fig. 7).

Acidalia deliciosaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 791 (1861).

Pure white. Wings not speckled; interior lines very indistinct, dentate, cinereous, mostly macular in female; discal line dark ochreous-brown and black-speckled, zigzag; submarginal fasciæ macular, cinereous, the portions bordering the discal line of the forewing below the apex and at posterior end being dark ochreous-brown; a marginal dentated line, and a slender cell spot black. Front of head, and palpi above dark ochreous-brown.

Expanse $\frac{9}{10}$ inch.

CRASPEDIA ADDICTARIA (Plate 201, Fig. 3 ♂, 4 ♀).

Acidalia addictaria, Walker, Catal. Lep. Het. B. M. xxii. p. 749 (1861), ♂.
Acidalia metaspilaria, Walker, *id.* xxiii. p. 793 (1861), ♂.

Ochreous-white. Wings very sparsely and indistinctly speckled with minute brown scales; antemedial, medial, and discal slender brown undulated line, the discal line most distinct; submarginal brown fasciæ indistinct, except a subapical

and basal patch joining the discal line on the forewing. Cell spot, and marginal line black. Front of head, and palpi above black; forelegs above cinereous-black.

Expanse $\frac{8}{10}$ inch.

Distinguished from C. *ligataria* by the transverse lines not being denticulated, and the hindwing not angular at the middle of exterior margin.

CRASPEDIA PEDILATA (Plate 201, Fig. 9, ♀).

Acidalia pedilata, Felder et Rogenh. Nov. Voy. Lep. v. pl. 128, f. i. (1875), ♀.

Pale ochreous-white. Wings not speckled; a minute black cell spot and marginal line: forewing with traces of an undulated antemedial and medial pale ochreous-speckled line; a discal prominent angulated irregular black-edged ochreous brown band, which is nearly linear at the anterior end, broadly oval in the middle, and ends posteriorly in a dark black patch; submarginal fascia pale ochreous: hindwing with a pale indistinct ochreous-brown speckled medial line, a waved discal narrow band, and slender marginal fascia. Front of head, palpi, and forelegs above brown.

Expanse $\frac{8}{10}$ inch.

CRASPEDIA ? TURPISARIA (Plate 201, Fig. 10, ♀).

Acidalia turpisaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 771 (1861), ♀.

Female. Ochreous-white. Wings thinly flecked with short transverse brown strigæ; crossed by an ill-defined discal denticulated line, which is composed mostly of brown-speckled points, bordering which is an outer broad cinereous-brown fascia extending more or less to the exterior border; marginal pointed line, blackish; forewing also with a blackish-speckled spot near upper end of discal line: hindwing with an elongated dentate blackish cell spot. Body brown-speckled; front of head, and palpi above ferruginous; forelegs above brown; middle and hind legs brown-speckled.

Expanse ♀ $1\frac{3}{10}$ inch.

This species, of which the female only is known, is placed in this genus provisionally.

Genus IDÆA.

Acidalia, *Treitschke, Schmett. Eur. v. 2, p. 438 (1825); *id.* vi. 2, p. 5 (1828). Duponchel, Lep. Fr. vii. 2, p. 108 (1829); *id.* viii. 1, p. 70 (1830). Curtis, Stephens, Lederer, Guénee, Walker.

Idæa, Treitschke, Schmett. Eur. v. 2, p. 446 (1825); *id.* vi. 2, p. 258 (1828). Schott, Schmett. Catal. p. 446 (1830)

Arrhostia, Hübner, Zuträge Samml. Exot. Schmett. iii. p. 12 (1825); *id.* Verz. bek. Schmett. p. 311 (1825-7).

Emmiltis (part) et *Leptomeris* (part), Hübner, Verz. pp. 309, 310 (1825-7).

Cymatida, Sodoffsky, Bull. Soc. Imp. Mosc. 1837, p. 18.

Male. Forewing triangular; cell three-fifths the length; first subcostal at one-

* Used by Hübner in 1816 (Verz. p. 31) for a genus of Lepidoptera.

fourth before end of the cell, second near the end, quadrifid, slightly touching the first; sixth from end of cell; discocellular slightly concave, radial from the middle; the middle median at one-sixth before end of cell, lower at one-third: hindwing short, broad, exterior margin somewhat convexly angular in the middle; cell half the length; two subcostals at half beyond end of cell; discocellular slightly concave, radial from the middle; the middle median near end, lower at two-fifths. Body slender; palpi small, porrect, laxly hirsute; apex short; antennæ minutely serrated, pubescent in front; legs long, slender, smooth, middle tibiæ with a pair of slender spurs; hind legs short, hind tibiæ broad, flat, clothed with adpressed fine hairs, which almost hide the tarsi, and with a tuft of long silky hairs from the base beneath.

Type, I. aversata.

IDÆA INTENSATA (Plate 200, Fig. 7).

Dark cinereous. Wings very numerously covered with minute dark-brown scales; crossed by a subbasal, antemedial, medial, discal, and two submarginal brown-speckled sinuous diffuse lines; the subbasal and outer submarginal line being obsolete on the hindwing; marginal dentated line, and lunular cell spot blackish. Body brown-speckled; collar brown; front of head, palpi, and forelegs above blackish.

Expanse $\frac{8}{10}$ inch.

"Dickoya" (*Green*).

Allied to the European *I. strigaria.*

IDÆA ACTIOSARIA (Plate 200, Fig. 11, ♂).

Acidalia Actiosaria, Walker, Catal. Lep. Het. B. M. xxii. p. 750 (1861), ♀.

Pale cinereous-brown. Wings very thinly speckled with minute black scales; medial, discal, and double submarginal zigzag diffused line distinct, darker cinereous-brown; the discal line denticulated; cell spot, and marginal dots black. Front of head, and palpi above black.

Expanse $\frac{7}{10}$ inch.

Ceylon, "Dickoya" (*Green*).

IDÆA ACTUARIA (Plate 200, Fig. 8).

Acidalia actuaria, Walker, Catal. Lep. Het. B. M. xxii. p. 752 (1861).

Pale ochreous-white. Wings very thinly speckled with minute black scales; antemedial, medial, discal, and double submarginal lines diffused, pale dull testaceous; the medial and discal lines slightly denticulated; cell spot, and marginal dots black. Front of head, and palpi above black.

Expanse $\frac{6}{10}$ inch.

"Dickoya" (*Green*).

IDÆA ASPILATARIA (PLATE 201, FIG. 6).

Acidalia aspilataria, Walker, Catal. Lep. Het. B. M. xxiii. p. 791 (1861).

Pale ochreous-white. Wings speckled with an extremely few indistinct minute black scales; crossed by an indistinct antemedial, medial, discal, and two submarginal very pale diffuse ochreous-brown nearly straight lines; the inner line obsolete on the hindwings; marginal dots black. No cell spot. Vertex and shaft of antennæ whitish; front of head, and palpi above blackish; forelegs above ochreous-brown.

Expanse $\frac{8}{10}$ inch.

IDÆA ADEPTARIA (PLATE 200, FIG. 9).

Acidalia adeptaria, Walker, Catal. Lep. Het. B. M. xxii. p. 753 (1861).

Very small. Pale cinereous-white. Wings thickly brown-speckled; cell spot, and marginal points black; medial, discal, and submarginal speckled dentate lines very ill-defined. Front of head, and palpi above black.

Expanse $\frac{5}{10}$ inch.

IDÆA ATTENTATA (PLATE 201, FIG. 5, ♀).

Acidalia attentata, Walker, Catal. Lep. Het. B. M. xxii. p. 754 (1861).

Pale yellowish-white. Wings very thinly speckled with minute black scales; a distinct black spot at end of cell; and marginal row of dots: forewing crossed by an antemedial, medial, discal, and double submarginal sinuous very indistinct zigzag pale brownish ochreous diffused lines: hindwing with a medial, discal, and submarginal similar lines; cell spot more distinct. Vertex white; front of head, and palpi above black.

Expanse, ♂ $\frac{8}{10}$, ♀ $\frac{9}{10}$ inch.

IDÆA NESCIARIA.

Acidalia Nesciaria, Walker, Catal. Lep. Het. B. M. xxii. p. 750 (1861), ♀.
Acidalia negataria, Walker, *id.* xxii. p. 751 (1861).
Acidalia absconditaria, var. Walker, *id.* p. 758.

Ochreous-white. Wings numerously speckled with minute cinereous scales; cell spot, and marginal points black; antemedial, discal, and submarginal lines cinereous-ochreous, dentated. Front of head, palpi, and forelegs above black.

Expanse $\frac{8}{10}$ inch.

IDÆA CÆSARIA (PLATE 200, FIG. 10).

Acidalia Cæsaria, Walker, Catal. Lep. Het. B. M. xxii. p. 750 (1861), ♂.
Acidalia obturbata, Walker, *id.* xxii. p. 755 (1861), ♂.
Acidalia perfectaria, Walker, *id.* xxiii. p. 783 (1861), ♂.

Whitish-testaceous, more uniformly testaceous in female. Wings minutely speckled with brown scales; medial, discal, and submarginal diffused lines purplish-

testaceous; the discal line denticulated; the marginal line much diffused, nearly occupying the border from the discal line; cell spot, and marginal points black. Cilia testaceous. Vertex, and shaft of antennæ white; front of head, and palpi above black.

Expanse $\frac{8}{10}$ inch.

"Punduloya and Dickoya" (*Green*).

IDÆA FIBULATA (Plate 201, Fig. 8, ♀).

Acidalia fibulata, Guénee, Phal. i. p. 490, pl. 15, fig. 5 (1857).
Acidalia cleoraria, Walker, Catal. Lep. Het. B. M. xxiii. p. 792 (1861).

Cinereous. Wings very numerously black-speckled; crossed by an antemedial, medial, and discal zigzag black lines, which are irregularly and broadly bordered with ochreous; submarginal fascia dark-cinereous; a black dentate cell spot, and marginal line; base of forewing also clouded with ochreous. Body thickly black-scaled; abdomen with cinereous-brown bands; cilia ochreous and black-speckled. Front of head, and palpi above black; forelegs blackish-cinereous.

Expanse, ♂ $\frac{9}{10}$, ♀ 1 inch.

IDÆA EXTIMARIA (Plate 204, Fig. 5, ♀).

Acidalia extimaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 794 (1861), ♀.

Female. Ochreous-white. Wings very thinly speckled with dark-brown scales; with traces of an oblique transverse antemedial, medial, and discal brown-speckled fascia; cell point, and marginal dots black. Front of head and palpi partly brown; forelegs brownish.

Expanse $1\frac{2}{10}$ inch.

Genus LYCAUGES.

Lycauges, Butler, Annals Nat. Hist. 1879, p. 373.

Wings small: forewing long, narrow; cell more than half the length; first subcostal at one-half before end of cell, second at one-fourth, slightly touching first near its end, quadrifid, sixth from end of cell; discocellular bent in the middle, radial from angle; middle median at one-sixth, lower at one-third: hindwing narrow, triangular, apex convex; cell long, more than half the length; two subcostals from the end; discocellular inwardly oblique, radial from the middle; the middle median about one-fifth, lower at half before end. Body rather stout, abdomen extending a little beyond hindwings; palpi small, slender, laxly clothed beneath, apex pointed; legs smooth, hind tibiæ with one pair of slender spurs; antennæ biciliated.

Type, L. lactea.

LYCAUGES DEFAMATARIA (Plate 201, Fig. 2, ♀).

Acidalia defamataria, Walker, Catal. Lep. Het. B. M. xxii. p. 752 (1861), ♀.

Pale brownish ochreous-white. Wings speckled with minute brown scales; a row of marginal black dots: forewing with two very oblique inner, two discal, and two submarginal speckled lines, of which the three inner are diffused, and the three outer denticulated with slight black points; a small black spot at end of the cell: hindwing with a medial similar speckled fascia, and three outer denticulated lines; all these markings more distinct in the female. Body brown-speckled; front of head, palpi, and fore femora above ochreous-brown.

Expanse, ♂ $\frac{8}{10}$, ♀ $\frac{9}{10}$ inch.

"Punduloya" (*Green*).

LYCAUGES POSTVITTATA (Plate 201, Fig. 12, ♀).

Pale ochreous-yellow. Wings very sparsely speckled with minute black scales: forewing crossed by, apparently, seven equidistant brownish-ochreous sinuous bands, which are partly confluent and ill-defined; and hindwing with a broad oblique medial and three outer similar coloured black-speckled bands, and a marginal row of black dentate spots; a curved submarginal row of prominent black points on forewing, which joins a black sinuous white-edged outer line bordering the discal band across the hindwing; a white-centred black spot on the forewing. Vertex, front of head, palpi, and forelegs above dark brown.

Expanse $\frac{9}{10}$ inch.

"Dickoya" (*Green*).

Genus LUXIARIA.

Luxiaria, Walker, Catal. Lep. Het. B. M. xx. p. 231 (1860), ♂.
Bithia, Walker, Catal. Lep. Het. B. M. xxxv. p. 1599 (1866), ♀.

Forewing triangular; costa arched at the end, apex pointed, exterior margin very oblique; cell nearly half the length; first and second subcostals close to end of cell, approximate, second trifid, fifth from end of cell; discocellular inwardly oblique, slightly concave, radial from the middle; the middle median at one-fifth before end of cell, lower at three-fifths: hindwing short, broad, triangular; costa very convex from base, exterior margin very oblique; cell one-third the length, very broad; costal and subcostal much curved from the base to end of cell; first subcostal close to end; discocellular slightly concave, radial from the middle; the middle median at one-fourth, lower at one-third. Body robust; palpi porrect, very laxly clothed, second joint extending half beyond the head, third joint short, pointed; antennæ stout, minutely pubescent; legs stout, hind tibiæ incrassated, with two pairs of slender spurs, apical pair short.

Type, L. alfenusaria.

LUXIARIA EXCLUSA (Plate 202, Fig. 5, ♀ ; Plate 215, Fig. 4, ♂).

Hemerophila exclusa, Walker, Catal. Lep. Het. B. M. xxi. p. 320 (1861), ♂.
Bithia exclusa, Walker, *id.* xxxv. p. 1599.
Hemerophila prætereuns, Walker, Catal. Lep. Het. B. M. xxi. p. 320 (1861), ♀.
Acidalia imprimata, Walker, *id.* xxiii. p. 771 (1861), ♀.
Macaria obstataria, Walker, *id.* xxiii. p. 928 (1861).
Bithia lignaria, Walker, *id.* xxxv. p. 1600 (1866).

Whitish-cinereous, more cinereous in the female. Wings more or less thickly speckled with minute cinereous-black scales; crossed by an inwardly-oblique medial and discal row of black points, which are more or less indistinct on the forewing, and on the hindwing of the male sometimes forming two denticulated lines, the transverse interspace on both wings in both sexes being also sometimes whitish; outer border with two ill-defined and indistinct brownish lunular fasciæ. Forewing with three equidistant black oblique costal streaks, the inner one being curved. Front of head, palpi, and forelegs brownish-ochreous; forelegs black speckled.

Expanse $1\frac{5}{10}$ inch.

Genus ERASTRIA.

Erastria, Hübner, Tentamen, p. 2 (1806).
Bradyepetes, Stephens, Catal. ii. p. 128 (1829); *id.* Illust. Haust. iii. p. 201 (1831); Catal. B. Lep. B. M. p. 180 (1850).
Timandra, Duponchel, Lep. Fr. vii. 2, pp. 105, 225 (1829); Lederer, Vers. Eur. Span. p. 30 (1853); Guénee, Phal. ii. p. 1; Walker, Catal. Lep. Het. B. M. xxiii. p. 797.
Calothysanis (part), Hübner, Verz. p. 301.

Forewing triangular, apex acute, subfalcate; exterior margin obliquely convex; cell more than half the length; first subcostal at nearly half before end of cell, joined to second by a short spur at one-third from its base, second at one-fifth, quadrifid, sixth from end of cell; discocellular bent above the middle, radial from the angle; middle median close to end, lower at fully two-fifths: hindwing broad, exterior margin acutely angular in the middle; cell half the length, broad at its base; two subcostals from the end; discocellular slightly concave, radial from the middle; the middle median extremely close to end of cell, lower at half. Body slender; palpi porrect, rather slender, laxly squamous beneath; antennæ broadly bipectinated to near tip, the branches minutely ciliated; legs smooth, middle tibiæ with one pair of moderately long spurs, hind tibiæ with two pairs of long spurs.

Type, E. amataria.

ERASTRIA CONVECTARIA (Plate 202, Fig. 3, 3*a*, ♂ ♀).

Timandra convectaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 800 (1861), ♂.
Timandra comptaria, Walker, *id.* xxvi. p. 1615 (1862).

Olivaceous ochreous-green, sparsely flecked with indistinct ochreous-brown,

crossed by an oblique straight ochreous-brown diffuse line from the apex to middle of abdominal margin, and an outer slender line from near its upper end, which is wavy hindward and angular on the hindwing; some speckles on base of the costa, three or four dots below the apex, and a cell spot, brown. Cilia ochreous-brown. Shaft of antennæ and vertex whitish; front of head, palpi, and forelegs above ochreous-brown. Female with the oblique line more broadly diffused.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{4}{10}$ inch.

ERASTRIA AVENTIARIA (Plate 202, Fig. 4, ♂ 4*a*, larva).

Timandra aventiaria, Guénee, Phal. ii. p. 3 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 801.

Olivaceous-green. Wings crossed by an oblique slender straight pale outer-bordered darker band, which extends from near apex of forewing to middle of abdominal margin of the hindwing; a minute white spot at end of cell of hindwing: forewing also with a curved marginal stripe and the cilia from the apex to angle dark purple. Front of head, palpi, and forelegs above brown.

Expanse ♂ ♀ $1\frac{1}{5}$ inch.

Larva slender, looped, with 10 legs; bright-green; with minute dorsal acute points or setæ, and two long processes on ninth segment. Pupa narrow, head pointed, purplish, olivaceous above; enclosed in a loose delicate web.

Genus RAMBARA.

Zanclopteryx * (part), Guénee, Phal. ii. p. 15 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 809.

Male. Wings delicate, semidiaphanous: forewing triangular, apex very acute, slightly falcate, exterior margin slightly convex in the middle; cell more than half the length; subcostal running very close to costal its whole length; first subcostal at nearly one-fourth before end of cell, trifid, fourth from end of cell; discocellular erect, nearly straight, radial from the middle; the middle median at nearly one-third, lower more than half before the end: hindwing short, broad, triangular, exterior margin convex; cell more than half the length; two subcostals at one-third beyond the cell; discocellular straight, radial from the middle; the middle median at one-fifth, lower half before the end. Body very slender, long; palpi very slender, porrect, extending half beyond the head; antennæ very long, slender, finely ciliated; legs very long and slender, middle tibiæ with a pair of short spurs, its tarsi very long; hind tibiæ slightly thickened in middle, finely pubescent along outer side, apical spurs very minute, tarsi short.

Type, R. saponaria.

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* The type of *Zanclopteryx* is a S. American insect, and quite distinct.

RAMBARA SAPONARIA (Plate 203, Fig. 8).

Zanclopteryx saponaria, Guénee, Phal. ii. p. 16 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 810 (1861).

Wings semidiaphanous, opalescent white; crossed by a zigzag discal and submarginal very indistinct pale-brown lunular band, and a marginal row of minute black spots: forewing also with a black spot at end of cell, and a subbasal series of pale-brown spots: hindwing with a pale-brown lunular cell spot.

Expanse 1 inch.

Family MICRONIIDÆ.

Wings delicate, mostly rather large and broad: hindwing very generally angular, dentate, or notched; finely speckled or streaked on the upper side, plain and without design on the underside. Body slender; head large, front depressed; eyes prominent; proboscis rather stout; palpi very slender, almost always straight, third joint filiform, often long and spatulate; antennæ short, laterally compressed, tomentose or pectinated in the male; legs mostly short, rather stout, tarsi smooth.

Larva unknown.

Genus STROPHIDIA.

Strophidia, Hübner, Verz. bek. Schmett. p. 290 (1818-25); Butler, Proc. Zool. Soc. 1879, p. 165; Westwood, Trans. Zool. Soc. 1879, p. 514.

Micronia, (part), Guénee. Walker.

Male. Forewing broad, triangular; costa arched, apex acute, exterior margin straight; cell one-third the length, triangular in shape; first subcostal at one-fourth before end of cell, second and third approximate, second free, third bifid, fifth and sixth on a footstalk at one-third beyond the cell; discocellular very slender, nearly erect, radial from above the middle; median veins straight, the two upper medians from end of cell, lower at one-half; submedian with a short slender lower basal branch: hindwing short, broad, quadrate, exterior margin with an acute prolonged subcaudal angle; cell one-third the length, broad; first subcostal close to end; discocellular outwardly-oblique, very slender, radial from above the middle; two upper medians from end of cell, lower at nearly half. Body slender, shorter than the hindwings; palpi very slender, obliquely porrect, third joint very long, acicular; antennæ slender, setaceous; legs squamous, longer than in Aeropteris (*A. grammearia*, Hübner) and Micronia; middle tibia not pilose, spurs unequal; hind tibiæ thickened, clothed above with fine long silky hairs, spurs stout.

Type, S. fasciata.

STROPHIDIA FASCIATA (Plate 203, Fig. 7, ♀).

Phalæna Geometra fasciata, Cramer, Pap. Exot. ii. p. 9, pl. 104, fig. D. (1777), ♂.
Phalæna caudata, Fabricius, Ent. Syst. iii. 2, p. 163. (1794).
Strophidia caudaria, Hübner, Verz. p. 290.
Micronia obtusata, Guénee, Phal. ii. p. 25, pl. 5, fig. 6 (1857), ♀.
? *Micronia caudata*, Guénee, Phal. ii, p. 25.

White. Forewing crossed by eight pale cinerous-brown strigose-lined duplex bands, which are broadest and blackest at their costal ends; each band strongly defined and well separated, the outer band being more strigose and situated close to the margin: hindwing with two medial transverse duplex bands, a single outer discal and two inner fasciæ with strigose anal ends, followed by a submarginal black line and spots on each side of the caudal angle; underside of both sexes white. Front of head, palpi, and forelegs above dark brown.

Expanse, ♂ $2\frac{1}{4}$, ♀ $2\frac{1}{2}$ to $2\frac{3}{4}$ inches.

Genus MICRONIA.

Micronia, Guénee, Phal. ii. p. 22 (1857).

Wings similar in shape to those in *Strophidia*, with prominent folds between the veins. Forewing more regularly triangular, with the first subcostal at one-third before end of cell, second at one-sixth, trifid, fifth and sixth from end of the cell; cell one-third the length at upper end; discocellular very slender, bent outward above the middle, radial from the angle; median somewhat distorted, middle and lower median on a short footstalk at one-half before end of the cell; a small nacreous streak near base of former on the underside; submedian with a short slender lower basal branch: hindwing with the cell one-third the length, broad at its base; discocellular extremely slender, barely perceptible, bent above the middle, radial from the angle; subcostals from end of cell; two upper medians from end of cell, lower at two-fifths. Body slender, short; palpi slender, third joint lanceolate, shorter than in Strophidia; antennæ thick, flattened, with stout, short, slightly separated blades; legs rather short, stout, middle tibiæ clothed with long fine silky hairs above, spurs long; hind tibiæ short, inflated, hairy above, with two pairs of spurs, the outer short, tarsi short and stout.

Type, M. aculeata.

MICRONIA ACULEATA (Plate 203, Fig. 1, ♀).

Micronia aculeata, Guénee, Phal. ii. p. 26, pl. 13, fig. 8 (1857), ♀; Walker, Catal. Lep. Het. B. M. xxiii. p. 817.

White. Wings with numerous short transverse pale cinereous-brown slender strigæ; crossed by three equidistant similar coloured fasciæ; a slender black

marginal line, and a spot at caudal angle of hindwing. Underside of male pale cinereous-brown, of female pure white. Front of head, palpi, and forelegs above dark brown.

Expanse, ♂ 1 $\frac{5}{10}$, ♀ 1 $\frac{9}{10}$ inch.

Genus PSEUDOMICRONIA.

Intermediate between *Strophidia* and *Micronia*. Wings shaped, and with like pattern of markings, as those in Strophidia. Forewing with the first subcostal at half before end of cell, second approximate, trifid, fifth and sixth on a footstalk at one-sixth beyond end of cell; discocellular slender, bent in middle, radial from angle; medians distorted, upper branch much recurved, middle and lower at one-half before end of cell; folds between the veins prominent: hindwing with the cell triangular, one-third the length; two subcostals from end; discocellular outwardly-oblique, very slender, radial from above middle, two upper medians from end of cell, lower at two-fifths. Palpi short, slender, not extending to the front, apical joint short; antennæ flattened, with a minute fine seta from each joint in front; legs rather short, thick, middle and hind tibiæ not pilose; hind tibiæ not inflated, spurs long.

Type, P. cælata.*

PSEUDOMICRONIA FRATERNA (PLATE 203, FIG. 2, ♀).

White. Forewing crossed by five bands composed of very delicate pale cinereous-brown strigose-lines, the costal ends of which are blackish; the two basal bands formed by eight equidistant lines, the two middle bands filled up with strigæ: hindwing with four transverse pale cinereous-brown fasciæ, and a submarginal strigose fascia; marginal slender line, and caudal spot black. Palpi and forelegs above brown. Underside of both sexes pure white.

Expanse 1 $\frac{8}{10}$ to 2 inches.

Genus PIGIA.

Pigia, Guénee, Phal. ii. p. 20 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 813 (1861).

Wings small. Forewing triangular, apex acute and subfalcate; cell long, nearly two-thirds the length; first subcostal at half before end of cell, second at two-fifths, quadrifid, slightly touching first above the base of fifth, sixth from end of cell; discocellular inwardly-oblique, radial from the middle; the middle median at one-sixth, lower at two fifths: hindwing short, triangular, exterior margin slightly convex; cell fully half the length; first subcostal near the end; discocellular erect, radial from the middle; the middle median near end, lower at half. Body slender; palpi small, curved, squamous, third joint short, pointed; antennæ with fine short tufted ciliæ;

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* *P. cælata*, Micronia caudata, Walk. (*nec* Fabricius). An allied Indian species.

legs rather strong, fore and middle tarsi long; middle tibiæ with a pair of slender spurs; hind tibiæ inflated, tufted with long fine silky hairs above, spurs not visible, tarsi short.

Type, P. infantularia.

PIGIA INFANTULARIA (Plate 203, Fig. 3).

Pigia infantularia, Guénee, Phal. ii. p. 20 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 813 (1861).

Micronia vanaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 820 (1861).

? *Phalæna opicata*, Fabricius, Ent. Syst. Suppl. p. 457 (1758).

Cinereous-white. Wings very minutely brown-speckled; crossed by three well-defined cinereous-brown oblique lines, the two outer lines proceeding from the apex and the inner line from the subcostal of forewing, each ending on the middle of the abdominal margin of hindwing; beyond is a similar coloured speckled fascia which is traversed by a sinuous white line, followed by a slender marginal line. Abdomen with similar narrow segmental bands; front of head, palpi, and forelegs above dark brown.

Expanse 7/10 inch.

Family CABERIIDÆ.

Wings broad, entire, fully extended in repose; very generally white in colour, with but few markings. Body slender; proboscis distinct, palpi porrect or incumbent, never very long; antennæ of male generally pectinated; legs well formed, hind tibiæ not incrassated, with two pairs of spurs.

Larva rather long, pedunculiform, slightly swollen posteriorly; head rounded. Lives on trees, exposed.

Pupa enclosed in an earthen cocoon or under moss.

Genus DEILINIA.

Sphecodes,* Hübner, Tentamen, p. 2 (1806).

Deilinia, Hübner, Verz. bek. Schmett. p. 310 (1825-7).

Cabera (part), Treitschke, Sch. Eur. V. 2, p. 437 (1825).

Cabera, Stephens, Catal. ii. p. 126 (1829); *id.* Illust. iii. p. 195 (1831); Schott, Schmett. Catal. p. 415 (1830); Lederer, Vers. Span. pp. 11, 36; Guénee, Phal. ii. p. 52; Walker, Catal. Lep. Het. B. M. xxiii. p. 867.

Forewing rather short, exterior margin slightly oblique; cell fully half the length; first subcostal at one-sixth, second approximate, quadrifid, sixth from end of cell; discocellular slightly concave, radial from the middle; the middle median near end, lower at one-third: hindwing short, exterior margin convex, even; cell half the

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* Used by Latreille in 1804 for a genus of Hymenoptera.

length, first subcostal near end; discocellular concave, radial from middle; the middle median near end, lower at two-fifths. Body slender, short; palpi small, porrect, short, laxly clothed, apex minute; antennæ bipectinated to near end, the branches ciliated; legs slender; hind tibiæ with two pairs of spurs.

Type, D. pusaria.

DEILINIA COSTATA (Plate 203, Fig. 4; 204, f. 3, ♂).

White; glossy. Wings very sparsely speckled with minute cinereous scales: forewing crossed by four and hindwing by three indistinctly defined straight cinereous-speckled bands; marginal points and cell spot black, minute. Costal edge of forewing, and collar, ochreous. Base of antennæ and vertex pure white; front of head, palpi, and forelegs above dark brown.

Expanse, ♂ $\frac{9}{10}$, ♀ 1 inch.

"Newra Elliya (May)," *Mackwood.*

"Punduloya" (*Green*).

Genus TERPNOMICTA.

Steganie,* Guénee, Duponchel's Catal. Lep. p. 270 (1844); Guénee, Phal. ii. p. 43 (1857); Walker. Catal. Lep. Het. B. M. xxiii. p. 860.

Anagoga et Lomographa (part), Hübner, Verz. pp. 294, 311.

Terpnomicta, Lederer, Vers. Eur. Span. pp. 35, 97 (1853).

Male. Forewing elongate, apex obtuse, exterior margin very slightly oblique; cell half the length; first subcostal at one-sixth, second from angle very close to end, trifid, fifth from end; discocellular slightly concave, radial from the middle; the middle median from angle close to end, lower at two-fifths: hindwing with the exterior margin slightly convex and angular in the middle; cell fully half; first subcostal from angle close to end; discocellular concave, no radial, middle median from angle close to end of cell, lower at nearly half. Body slender; palpi porrect, extending a little beyond the head, second joint very laxly pilose beneath, third joint slender, pointed; antennæ strongly bipectinated to near tip, the branches stout; legs rather short, hind tibiæ with two pairs of spurs (*T. permutata*).

TERPNOMICTA NIGRARENARIA.

Stegania (?) nigrarenaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 864 (1861).

"Male and female. Pale cinereous; minutely speckled with black; wings with dull ochreous-brown denticulated lines; submarginal line diffuse; marginal festoon deep black; a discal black dot in each wing, representing the reniform mark in the forewing.

* Used in 1830 for a genus of Diptera.

Expanse $9\frac{1}{2}$ to $10\frac{1}{2}$ lines."

Ceylon. In Mr. E. L. Layard's Collection.

Family MACARIIDÆ.

Wings of moderate size, delicate, smooth, slightly and minutely speckled; alike in colour and markings: forewing triangular, exterior margin often notched in front; hindwing often angular or dentate, not excavated. Body generally robust; palpi moderately long, straight or slightly ascending, contiguous at the tips; legs slender, smooth, moderately long; hind tibiæ longer than the femora, often incrassated; antennæ in male pubescent or setulose, rarely pectinated.

Larva hardly elongated, cylindrical; head globular. Lives exposed on trees or shrubs. Pupa in a cocoon among brushwood or on the surface of the earth.

Genus GUBARIA.

Semiothisa (part), Hübner, Verz. p. 298 (1823-25); Butler, Tr. Ent. Soc. 1881, p. 348.

Male. Forewing triangular, apex pointed, exterior margin oblique, nearly straight; cell half the length, narrow; first subcostal at one-sixth before end of cell, second close to end, trifid, fifth from the end; discocellular slender, bent inward above the middle, radial from below the angle; two upper medians from end of cell, lower at nearly half; submedian bent close to end, with a short curved slender lower branch: hindwing broad, somewhat quadrate, exterior margin dentated above the angle; cell nearly half the length, bent and wide at the base; two subcostals from end; discocellular concave; no radial; two upper medians from end of cell, lower at one-third. Body moderately stout; palpi porrect, stout, second joint extending two-thirds beyond the head, laxly squamous beneath, third joint short, obtuse; antennæ minutely ciliated; legs squamous, hind tibiæ long, incrassated, grooved along inner side and furnished with a pencil of long silky hairs from the base; with two pairs of spurs, the upper pair long and the lower short, hind tarsi short.

Type, G. fasciata.

GUBARIA FASCIATA (Plate 203, Fig. 6, 6*a*, ♂ ♀; 6*b*, larva).

Phalæna fasciata, Fabricius, Syst. Ent. p. 629 (1775); Ent. Syst. iii. 2, 164.
Phalæna Geometra Eleonora, Cramer, Pap. Exot. iii. p. 172, pl. 288, f. E.F.G. (1780).
Macaria Eleonora, Walker, Catal. Lep. Het. B. M. xxiii. p. 933.
Geometra punctata, Fabricius, Ent. Syst. iii. 2, 126 (1794).
Macaria Victorinata, Guénee, Phal. ii. p. 90 (1857), ♂.

Male. Brownish-grey, fading to ochreous-brown. Wings palest externally; crossed by a broad straight medial white band, which does not reach the costa, the

inner edge of which is slightly brown-speckled, and the outer edge bordered by a black discal line, which is thickest on the hindwing and is bent outward before the costa on forewing; a slight black dentate spot more or less apparent at end of each cell: forewing with the costal edge tinged with ochreous and black-speckled; with faint traces of an antemedial curved blackish line, and a brownish costal patch before the apex: hindwing with a broad black discal patch between the subcostals and upper medians, with intervening and contiguous black strigæ, the veins bordering the patches and of the strigæ being bright ochreous-yellow. Cilia white. Female darker; the white band sometimes duller and slightly brown-speckled, its bordering black line, costal and discal black patches more prominent; outer marginal blackish line distinct. Abdomen ochreous-yellow towards the tip. Underside paler; the basal area ochreous. Body beneath, legs, antennæ, and palpi ochreous-yellow; tip of palpi brown.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{3}{8}$ to $1\frac{1}{8}$ inch.

Larva looped; with 10 legs; green, with longitudinal dorsal and a sublateral yellow stripe. Pupa brown.

"Feeds on *Mimosa concinna.*"

GUBARIA NORA (Plate 203, Fig. 5, 5*a*, ♂ ♀).

Macaria Nora, Walker, Catal. Lep. Het. B. M. xxiii. p. 934 (1861).
Macaria Eleonorata, Guénee, Phal. ii. p. 89 (1857).

Darker than *G. fasciata*. Wings of a more blackish-grey tint, the basal and discal area more or less black-speckled, the white band broader, brown-speckled, the transverse bordering lines and cell spot blacker; discal patches on hindwing less sharply defined, the medial angular area beyond being white-speckled; some white speckles also bordering the costal patch on forewing, and a few sometimes on the middle of exterior border, these white-speckled patches being more prominent in the female. Cilia interrupted brown and white. Underside darker; basal area and costal border ochreous and black-speckled; white subapical and medial exterior marginal speckled patches distinct. Body beneath, legs, palpi, and antennæ ochreous; antennæ brown-speckled.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{3}{8}$ to $1\frac{5}{8}$ inch.

Genus MACARIA.

Macaria, Curtis, Brit. Ent. iii. fol. 132 (1826); Stephens, Illust. Haust. iii. p. 319; Guénee, Phal. ii. p. 66 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 878 (1861); Butler, Trans. Ent. Soc. 1881, p. 481.
Semiothisa * (part), Hübner, Verz. p. 298 (1823-25).
Philobia, Duponchel, Lep. Fr. vii. 2, p. 105 (1829).

* Hübner's type of Semiothisa—Zuträge, i. p. 27 (1818)—is *gambaria*, which was published long before p. 298 of the Verz.

Male. Forewing short, triangular, apex slightly subfalcate, exterior margin convexly angular before the middle; cell more than half the length; first subcostal at one-sixth, second approximate, trifid; fifth from end of cell; discocellular outwardly oblique, concave, radial from the middle; two upper medians from end of cell, lower at one-third; submedian bent at the base, and with a short curved lower basal branch, the space above the angle and within the basal fork somewhat vitreous: hindwing short, broad, exterior margin angular in the middle; cell fully half the length; two subcostals from end; discocellular bent in the middle; no radial; two upper medians from end, lower at one-third. Body slender; palpi porrect, stout, short, laxly clothed, apex minute; antennæ serrated, shaft coarsely annulated, minutely ciliated; legs squamous; hind tibiæ incrassated, with two pairs of very short spurs, hind tarsi short.

Type, M. liturata.

MACARIA EMERSARIA.

Macaria Emersaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 925 (1861).

Testaceous-white. Wings minutely black-speckled; cell spot small: forewing crossed by an excurved antemedial, a zigzag medial, and an incurved postmedial brown line, each angulated inward near costal end; outer line bordered by a broad ochreous-brown fascia, beyond which the outer border is more or less cinereous-brown, traversed by some intervening whitish spots; upper end of the fascia above and below the angle of discal line sometimes bright ferruginous-brown and black-speckled; marginal line distinct, dark ochreous-brown: hindwing with three similar waved lines, outer bordering fasciæ, and marginal lunular line. Cilia pale ochreous-yellow, tipt with brown at the vein points and below apex of forewing. Body brown-speckled; front of head, palpi above, and forelegs ochreous-brown.

Expanse $1\frac{1}{10}$ to $1\frac{2}{10}$ inch.

MACARIA (?) CESSARIA.

Macaria (?) cessaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 936 (1861).

"Male. Pale luteous-yellow. Wings with a red nearly straight line, which extends from four-fifths the length of the costa of the forewing to middle of the abdominal margin of the hindwing, and is accompanied on the inner side hindward with a diffuse pale-brownish band; a few blackish points between it and the exterior border, which is red. Forewing acute, hardly falcate; hindwing with the exterior border distinctly angular. Palpi porrect, rather long, third joint about half length of second; antennæ rather stout.

"Expanse 10 lines."

Ceylon. In Mr. E. L. Layard's Collection.

MACARIA (?) SUBCAUDARIA.

Macaria (?) subcaudaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 936 (1861), ♀.

"Female. Pale cinereous, minutely speckled with brown. Wings with the interior, exterior, and submarginal lines brown, slender, slightly denticulated; submarginal line partly black, contiguous on its exterior side to a brown triangular costal spot; space between it and the exterior border brown in the hindwing and partly brown in the forewing; marginal festoon black. Forewing truncate-falcate at the tip; exterior border very slightly angular before the middle: hindwing extending beyond the abdomen, exterior border very acutely angular in the middle, forming a short tail.

"Expanse 14 lines."

Ceylon. In Mr. E. L. Layard's Collection.

Genus GONODELA.

Pharmacis,* Hübner, Verz. bek. Schmett. p. 298 (1823-25).
Gonodela, Boisduval, Ind. Méth. Eur. Lep. p. 186 (1840).

Forewing short, triangular, apex obtusely pointed, exterior margin slightly angular in the middle: hindwing short, quadrate, exterior margin slightly scalloped, angular in the middle. Venation similar to that in *Macaria*. Antennæ submoniliform, very minutely ciliated; hind tibiæ not thickened, with two pairs of stout spurs. Wings shorter than in *Macaria;* apex of forewing not subfalcate; hindwing less angular.

Type, G. æstimaria.

GONODELA SUFFLATA (Plate 205, Fig. 5, 6, ♂ ♀).

Macaria sufflata, Guénee, Phal. ii. p. 88, pl. 17, fig. 8 (1857), ♂; Walker, Catal. Lep. Het. B. M. xxiii. p. 925 (1861).

Brownish-cinereous. Wings transversely speckled with short blackish strigæ: forewing crossed by three dark-brown inwardly-oblique lines; the inner line excurved, the middle line undulated, the outer incurved, each retracted to the costa; outer line darkest, and with a contiguous very diffused line and ill-defined bordering fascia, which is interrupted before the apex: hindwing with a medial and discal almost straight line, the latter with contiguous diffused line and bordering fascia, on the middle of which is a blackish patch; cell spot black; cilia white. Female with more ochreous-brown markings.

Expanse $1\frac{1}{10}$ inch.

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* Hübner had previously used this name (Verz. p. 199) for a genus of Lepidoptera.

GONODELA VASUDEVA (Plate 205, Fig. 11, ♀).

Macaria Vasudeva, Walker, Catal. Lep. Het. B. M. xxiii. p. 933 (1861), ♀.

Pale cinereous vinaceous-brown. Wings transversely speckled with short blackish strigæ: forewing crossed by three inwardly-oblique purplish-brown lines; the two inner lines slightly undulated and retracted towards the costa; the outer line straight and outwardly bordered by a broad diffused purplish-brown fascia, which is interrupted before the apex: hindwing with a medial and discal line, the latter less defined and outwardly bordered by the diffused purplish-brown fascia; cell spot minute, black; cilia ochreous-brown. Front of head and palpi brown; legs yellowish, brown-speckled.

Expanse $1\frac{1}{8}$ inch.

GONODELA HONORARIA (Plate 205, Fig. 12, ♀).

Macaria honoraria, Walker, Catal. Lep. Het. B. M. xxiii. p. 928 (1861), ♀.
Macaria permotaria, Walker, *id.* xxiii. p. 929 (1861), ♀.

Very pale yellowish-ochreous. Wings more or less indistinctly speckled with ochreous-brown strigæ; cell spot small and indistinct: forewing with a very indistinct pale brownish-ochreous curved antemedial line, and an oblique straight discal row of minute black points, which are outwardly bordered by a pale brownish-ochreous fascia, followed by two similar outer sinuous fasciæ; two distinct black dentate marks on the costa before the apex: hindwing with a medial indistinct brown-speckled line, and a straight black discal line, which is widest at the lower end, bordered outwardly by a pale brownish-ochreous fascia, and followed by two outer sinuous fasciæ. Front of head and palpi above brown; fore and middle legs thickly brown-speckled.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{2}{10}$ inch.

Genus ZEHEBA.

Evarzia,* Walker, Catal. Lep. Het. B. M. xxxv. p. 1560 (1866).

Male. Forewing triangular, apex produced, falcate, exterior margin angular above the middle; cell two-fifths the length; first and second subcostals close to end, second trifid, fifth from end of cell; discocellular outwardly oblique, radial from its middle; two upper medians from end of cell, lower at two-fifths: hindwing short, broad, exterior margin dentated in male, angular in the middle in female; cell one-third the length, very broad; subcostal much arched to end of cell; first subcostal before the end; discocellular outwardly oblique; no radial; middle median close to end, lower at one-third. Body moderately slender; palpi rather stout,

* Nec *Evarzia*, Walker, Catal. xx. p. 273 (1860).

obliquely ascending, extending half beyond the front, second joint broad, truncate at end, third joint minute, conical; antennæ slender, very minutely ciliated in male, simple in female; legs squamous, rather slender, hind tibiæ incrassated, with two pairs of slender unequal spurs.

Type, Z. aureata.*

ZEHEBA MARGINATA (Plate 205, Fig. 8, ♀).

Evarzia marginata, Walker, Catal. Lep. Het. B. M. xxxv. p. 1561 (1861), ♀.

Golden yellow. Forewing crossed by an antemedial, medial, and a discal undulating purplish-brown line, the costal end of the two former retracted and blackish; outer border from the discal line and from below the apex purplish-ochreous, traversed by very faint traces of a blackish sinuous fascia; lunular cell spot brownish: hindwing crossed by a similar undulating medial and discal line, and bordering purplish-ochreous band. Palpi tipt with black; fore and middle legs black-speckled.

Expanse ♀ $1\frac{4}{10}$ inch.

Genus AZATA.

Azata, Walker, Catal. Lep. Het. B. M. xx. p. 272 (1860).

Forewing triangular, apex subfalcate, exterior margin angular above the middle; cell half the length; subcostals close to end, second trifid; discocellular outwardly oblique, radial from the middle; two upper medians from end, lower at two-fifths: hindwing short, quadrate; exterior margin angular in the middle; cell half the length; two subcostals from end of cell; discocellular outwardly oblique; no radial; two upper medians from end of cell, lower at one-third. Body short; palpi short, stout, extending a little beyond the head, third joint minute; antennæ slender, very minutely serrated; legs rather slender, hind tibiæ not thickened, with two pairs of spurs.

Type, A. Idriasaria.

AZATA QUADRARIA (Plate 205, Fig. 1).

Cinereous-ochreous or cinereous-brown. Wings thickly brown-speckled: forewing crossed by three dark brown diffused lines; the outer line straight and broad, erect; the outer margin clouded with cinereous-brown; marginal line brown, darkest below the apex: hindwing with a medial and discal dark brown line, the latter disposed near to and parallel with the angular outer margin; marginal line distinct. Underside yellowish-ochreous, flecked with dark brown transverse strigæ, and crossed by a darker medial line and broad discal fascia.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

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* *Z. aureata* is a Darjeling species, distinguished from *Z. marginata* by the discal line being placed nearer the margin, and not undulated.

AZATA FERRUGINATA (Plate 205, Fig. 2).

Ferruginous. Wings numerously speckled with short transverse dark brown strigæ: forewing crossed by an indistinct antemedial and medial, and a distinct discal slightly waved dark brown line, the latter having a greyish-brown outer shade, with more or less distinct blackish medial patch; marginal line dark brown, which is most prominent below the apex: hindwing with an indistinct medial brown line, and a more distinct discal undulated line with outer bordering greyish-brown, patchy, shade; marginal line brown. Underside bright ferruginous, thickly speckled with brown strigæ, crossed by a darker medial and discal fascia.

Expanse 1 inch.

From Dr. Thwaites' Collection.

Family FIDONIIDÆ.

Wings broad, entire; not angular; almost always speckled; hindwing sometimes differing in colour from the forewing. Body generally slender; proboscis slender, often short; palpi contiguous, rostriform, porrect or incumbent, extending beyond the front; antennæ of male generally pectinated, often plumose, the branches long, slender, often reflexed; legs slender, smooth, hind tibiæ rarely incrassated.

Flight diurnal.

Larva elongated, cylindrical; head globular. Lives generally on low plants. Pupa generally subterranean.

Genus TEPHRINA.

Tephrina, Guénee, Duponchel's Catal. Lep. p. 246 (1844); Guénee, Phal. ii. p. 96 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 951 (1861).

Euchæca (part), Hübn. Verz. p. 298.

Adactylosis (part), Hübn. *id.* p. 304.

Eubolia, Boisduval. Lederer. (*nec* Duponchel).

Male. Forewing elongate, apex obtuse, exterior margin slightly oblique and convex hindward; cell half the length; first subcostal close to end of cell, second at the end, trifid, fifth also from the end; discocellular outwardly-oblique, concave, radial from the middle; two upper medians from end of cell, lower at one-third: hindwing broad, apex convex, exterior margin hardly angular in the middle; cell half the length; first subcostal from angle immediately before end of cell; discocellular concave; no radial; middle median from angle immediately before end of cell, lower at two-fifths. Body slender; palpi porrect, stout, projecting more than half beyond the head, laxly clothed, apex pointed; antennæ pectinated to near end, the branches short; legs squamous, hind tibiæ long, spurs short.

Type, T. murinaria.

TEPHRINA FALSARIA (Plate 204, Fig. 1, 2, ♂ ♀).

Macaria falsaria, Walker, Catal. Lep. Het. B. M. xxvi. p. 1649 (1862), ♂.
Aspilates parallelaria, Walker, *id.* xxvi. p 1680 (1862), ♀.

Ochreous-white. Wings numerously covered with short thick ochreous-brown strigæ, which are thickest on the exterior border, and more delicate and less numerous in the female. Cell spot small, black: forewing crossed by an equidistant antemedial, medial, and discal oblique straight brown diffuse line, of which the two inner are palest, and the outer externally bordered by a sinuous fascia: hindwing with a similar medial and discal line, and outer bordering diffuse fascia. Body brown-speckled; front of head, and palpi above brown; legs brown-speckled.

Expanse $1\frac{1}{10}$ inch.

TEPHRINA CACAVENA (Plate 204, Fig. 11, 12, ♂ ♀).

Macaria Cacavena, Walker, Catal. Lep. Het. B. M. xxiii. p. 930 (1861).

Very pale yellowish-ochreous. Wings uniformly speckled with short purplish-ochreous brown strigæ: forewing crossed by three oblique straight purplish-brown strigose duplex bands, and hindwing with two bands. Cell spot and marginal lunular line blackish. Female with outer band more entire and broader. Body brown-speckled; front of head, palpi, and legs above brown-speckled.

Expanse 1 inch.

TEPHRINA PULINDA (Plate 204, Fig. 7, 8, ♂ ♀).

Cleora Pulinda, Walker, Catal. Lep. Het. B. M. xxi. p. 333 (1860), ♂.
Macaria strenuataria, Walker, Catal. Lep. Het. B. M. xxvi. p. 1647 (1862).

Male and female. Ochreous-white. Wings with numerous rather long dark brown transverse strigæ, which are most thickly disposed on the exterior border; cell spot ill-defined, diffused; marginal points blackish: forewing crossed by an antemedial and discal undulated dark-brown speckled line, and a medial brown-speckled band, the outer band most distinct, almost linear, and externally bordered by a brownish-speckled fascia, which latter has a darker patch on its middle: hindwing with a less defined medial band, and a discal line with outer bordering speckled fascia. Body brown-speckled; antennæ of male dark grey and white speckled; front, palpi, and legs above yellowish; legs slightly brown-speckled.

Expanse 1 to $1\frac{1}{10}$ inch.

TEPHRINA MODESTA (Plate 204, Fig. 6, ♂).

Cinereous-ochreous. Forewing crossed by an antemedial, medial, and a discal ochreous-brown slightly undulated line; the two inner lines diffused and

indistinct, the outer line prominent and with an indistinctly darker cinereous-ochreous bordering fascia: hindwing with a medial diffused indistinct line, and a prominent discal line with bordering darker cinereous-ochreous fascia. Cell spot distinct, brown. Antennæ and vertex ochreous; front, and palpi blackish; legs cinereous-brown.

Expanse, ♂ 1, ♀ 1 $\frac{1}{10}$ inch.

Genus PLUTODES.

Plutodes, Guénée, Phal. ii. p. 117 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 976 (1861).

Male. Forewing short, rounded externally; cell half the length; first subcostal at one-fifth, five-branched, sixth from end of cell; discocellular outwardly oblique, slightly concave, radial from above the middle; two upper medians from end of cell, lower at one-third: hindwing very short and broad, apex and exterior margin very convex; cell nearly half the length; two subcostals from end; discocellular outwardly oblique, concave; no radial; two upper medians from end of cell, lower at one-fourth. Body slender; palpi curved upward, compressed, broad, clothed with fine lax hairy scales, third joint very minute; antennæ broadly pectinated on the *inner side only* to one-third the tip, the branches minutely ciliated; legs long, slender, squamous; hind tibiæ with two pair of spurs.

Type, P. cyclaria.

PLUTODES TRANSMUTATA (Plate 205, Fig. 7).

Plutodes transmutata, Walker, Catal. Lep. Het. B. M. xxiii. p. 976 (1861) ♂.

Gamboge-yellow. Wings with a broad transverse cinereous-red band tapering from below the costal border of forewing to near the anal angle of hindwing, the outer edge of the band being straight, and a very broad oval submarginal band of the same colour on both the wings, the inner edge of the bands being waved. Base of thorax and abdomen above red; anal tuft yellow; front of head, palpi, and forelegs above ochreous-yellow.

Expanse 1$\frac{2}{10}$ inch.

Genus CORYMICA.

Corymica, Walker, Catal. Lep. Het. B. M. xx. p. 230 (1860).
Caprilia, Walker, Catal. Lep. Het. B. M. xxxv. p. 1568 (1866).

Male. Forewing elongated, narrow; costa much arched at the base, apex acute, falcate, exterior margin oblique and slightly denticulated, posterior margin lobular at the base; cell three-fifths the length; first subcostal about one-third before end of cell, joined to costal for a short distance from near its base; second at one-sixth, trifid, fifth from end of cell; discocellular very slender, nearly erect, radial from the

middle; the middle median at one-tenth, lower at two-tenths; submedian with a curved lower branch at one-third from its base, the central area being transparent, vitreous, concave, and with raised rim—thus forming a basal vesicular cavity: hindwing short, costa convex at base and concave in the middle; apex produced to a point, exterior margin denticulated, very oblique; cell more than half the length; costal recurved; subcostal arched to end of cell; first subcostal near end of cell; discocellular slender, inwardly-oblique; no radial; middle median at one-fifth, lower at two-fifths. Body moderately stout; palpi slightly decumbent, extending half beyond the head, laxly clothed, second joint ovate, third joint conical, pointed, hardly half length of second; antennæ setaceous; legs long, slender, hind tibiæ with two pairs of slender spurs.

Female. Wings broader; vesicle less developed, not transparent.

CORYMICA ARNEARIA (Plate 205, Fig. 9, 10, ♂ ♀).

Corymica arnearia, Walker, Catal. Lep. Het. B. M. xx. p. 231 (1860), ♀.
Caprilia vesicularia, Walker, *id.* xxxv. p. 1569 (1866).

Bright yellow. Wings with a few scattered dark red scales: forewing with a red-speckled streak on base of costa, which is slightly curved at its end, a spot below the cell, a constricted streak on middle of posterior margin, a smaller streak before the apex, and another before the posterior angle; marginal line thick, red; exterior border slightly flushed with red: hindwing with a red streak on middle of the costa, a small spot near apex, some indistinct discal spots, and thick marginal line. Cilia whitish, tinged with red at the vein points. Collar, palpi above, and narrow bands on legs dark red.

Male with a transparent vitreous vesicular basal spot below end of the cell.

Expanse, ♂ 1, ♀ $1\frac{3}{10}$ inch.

From Dr. Thwaites' collection.

Genus OZOLA.

Ozola, Walker, Catal. Lep. Het. B. M. xxiv. p. 1080 (1862).

Forewing triangular, costa arched, apex produced, acute, subfalcate, exterior margin convex in the middle, cell more than half the length; first subcostal at one-fourth, quadrifid, fifth from end of cell; discocellular outwardly-oblique, radial from the middle; the middle median at one-fifth, lower at two-fifths: hindwing broad, triangular, exterior margin convex; cell half the length; costal and subcostal widely apart; first subcostal at one-fifth; discocellular slightly concave, radial from the middle; the middle median at one-fifth, lower at two-fifths. Body moderately stout, short; palpi porrect, extending half beyond the head, second joint laxly squamous

above, third joint minute; antennæ slender, very finely ciliated in male; legs slender, long; hind tibiæ with two pairs of spurs.

OZOLA MICRONIARIA (Plate 204, Fig. 9, 10, ♂ ♀; 10*a*, larva).

Ozola microniaria, Walker, Catal. Lep. Het. B. M. xxiv. p. 1080 (1862), ♀.
Phibalapteryx acuta, Walker, *id.* xxv. p. 1340 (1862), ♀.

Pale cinereous-ferruginous. Wings numerously black-speckled, the speckles darker and more distinct in the female; crossed by an ill-defined antemedial and a postmedial black-speckled line, both of which are more diffused in the female and sometimes form dusky fasciæ; a distinct black cell spot, and more or less defined subapical spots, and marginal line. Body, and forelegs black-speckled.

Expanse, ♂ $\frac{9}{10}$, ♀ 1 inch.

Larva looped; with 10 legs; greyish, minutely speckled with black. Pupa pale-reddish.

"Feeds on *Premna latifolia*."

Genus NADAGARA.

Nadagara, Walker, Catal. Lep. Het. B. M. xxiv. p. 1093 (1862).

Male. Forewing elongate, triangular, apex acute, slightly subfalcate, exterior margin very oblique and slightly convex; cell nearly half the length; first subcostal at one-fifth, bifid near its end, third approximate, trifid, sixth from end of cell; discocellular slender, outwardly-oblique, radial from the middle; the middle median very close to end, lower at fully two-fifths: hindwing short, triangular, exterior margin slightly convex; cell nearly half the length; first subcostal very close to end; discocellular extremely slender; no radial; middle median very close to end, lower at two-fifths. Body slender; palpi stout, obliquely porrect, laxly squamous, joints well separated, second joint extending half beyond the head, broad at its end, third joint conical in male, lanceolate in female, half length of second; antennæ smooth, stout, flattened; legs long, slender, hind tibiæ with two pairs of slender spurs.

Type, N. vigaia.

NADAGARA VIGAIA.

Nadagara Vigaia, Walker, Catal. Lep. Het. B. M. xxiv. p. 1093 (1862), ♀.

Purpurescent-cinereous. Wings speckled with a very few black scales; crossed by an oblique straight dark brown discal line, which extends from the apex of forewing to middle of the abdominal margin, and is narrowly bordered on its outer edge by a sharp white line, and on its inner edge by a diffused ochreous-brown shade; the line is slightly dentated at its costal end, and is there bordered by a subapical cluster of black points: forewing also with a curved antemedial series of small black

spots, and a more distinct spot at end of the cell: hindwing with some black-speckled spots below the apex. Body black-speckled; collar, front of head, and palpi ochreous-brown; palpi and legs black-speckled.

Expanse $1\frac{3}{8}$ inch.

Genus ZOMIA.

Omiza,* Walker, Catal. Lep. Het. B. M. xxiv. p. 1084 (1862).
Zomia, Moore, Proc. Zool. Soc. 1867, p. 650.

Forewing long, narrow; costa arched at the base, apex acute, exterior margin convexly-angular in the middle; cell more than half the length; first subcostal at one-fifth, bifid near its base, joined to costal near its end by a short recurrent spur, third approximate, trifid, sixth from end of cell; discocellular outwardly-oblique, radial from the middle; the middle median very close to end, lower at one-third: hindwing rather long, narrow, apex very convex, anal angle prominent; cell fully half the length; subcostal much arched at the base, first subcostal near end of cell; discocellular very oblique, bent above the middle; no radial; middle median near end, lower at two-fifths. Body rather stout; palpi long, curved upward to near vertex, narrow, squamous, third joint short, conical; antennæ in male broadly bipectinated to near tip, the branches thick and ciliated, less bipectinated in female; legs squamous, hind tibiæ with two pairs of long spurs.

Type, Z. incitata.

ZOMIA SERPENTINARIA.

Timandra serpentinaria, Walker, Catal. Lep. Het. B. M. xxxv. p. 1634 (1866).

Male. Forewing pale olivescent purplish-red; very sparsely speckled with short slender black strigæ; crossed by a sap-green antemedial and an irregular outwardly-recurved postmedial band, both being dilated at the costal end; the outer band black-speckled on its lower outer edge and bordered by a subapical oblique black-speckled streak: hindwing ochreous-red, with the anal border olivescent purplish-red and marked with black strigæ and a short sap-green anal streak. Body purplish-red; middle of thorax and front of tegulæ sap-green; tibiæ and tarsi also sap-green.

Expanse $1\frac{1}{2}$ inch.

Genus PRIONIA.

Prionia, Hübner, Zuträge, iv. p. 40 (1832); Guénee, Phal. i. p. 143 (1857).
Osicerda, Walker, Catal. Lep. Het. B. M. xxiv. p. 1083 (1862).
Celesdera, Walker, *id.* xxvi. p. 1749 (1862).
Isnisca, Walker, *id.* xxvi. p. 1765 (1862).

Forewing rather long; costa arched at the base, apex pointed, exterior margin angular in the middle; cell three-fifths the length; first subcostal about one-fifth,

* Used by Walker in 1860 for a genus of Lepidoptera.

bifid close to its base, the first touching the costal near its end, third trifid, sixth from end of cell; discocellular outwardly-concave, radial from the middle; the middle median very close to end, lower at nearly one-third: hindwing short, apex convex, anal angle prominent; cell half the length, broad at the base; first subcostal near end; discocellular outwardly-concave, no radial; middle median near end of cell, lower at one-third. Body rather stout, short; palpi short, slender, slightly curved, extending a little beyond the head, smoothly squamous, third joint short, thick, very obtuse; antennæ broadly bipectinated to near tip, branches ciliated, less pectinated in female: legs smooth; hind tibiæ with two pairs of spurs.

Type, P. squalida.

PRIONIA SQUALIDA (Plate 205, Fig. 3, 4, ♂ ♀; 4*a*, larva).

Prionia squalida, Hübner, Zuträge, iv. p. 40, fig. 787-8 (1832), ♀; Guénee, Phal. i. p. 144 (1857).
Prionia violacearia, Guénee, Phal. i. p. 144 (1857), ♀.
Osicerda alienata, Walker, Catal. Lep. Het. B. M. xxiv. p. 1084 (1862), ♂ ♀.
Celesdera schistifusata, Walker, *id.* xxvi. p. 1749 (1862), ♀.
Isnisca cyclogonata, Walker, *id.* p. 1765 (1862), ♂.

Male. Forewing violaceous-cinereous, thickly flecked with short transverse violet-black strigæ, which are most densely disposed and confluent on the basal half; crossed by an ill-defined blackish antemedial and a postmedial undulated diffuse line, each with a dilated ochreous costal end: hindwing ochreous, the anal border broadly violaceous-cinereous, flecked with short black strigæ. Body violaceous-cinereous, black-speckled; front of head, palpi, and forelegs above ochreous-brown; palpi black tipt.

Female. Wings with dark red strigæ, and dilated costal stripes on forewing; base of hindwing darker ochreous. Body reddish.

Expanse, ♂ $\frac{9}{10}$, ♀ $1\frac{1}{10}$ inch.

Larva rather thick, looped; with 10 legs; dark purple-brown, delicately reticulated with white, and with some irregular white marks on the middle and anal segments; head and front legs black. Pupa short, front obtuse, pinkish, with black bands. "Feeds on *Ixora*" (Thwaites).

Family PANTHERIDÆ.*

Zerenidæ, Guénee, Phal. ii. p. 195; Walker, Catal. Lep. Het. B. M. xxiv. p. 1106.

Wings ample, entire, generally white or yellow, with dark spots or lines: fore-

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* *Zerene* was used by Hübner (Verz. p. 97, 1816) in the Pierinæ. It cannot therefore be retained as a genus of Geometrina. A new family appellation thus becomes necessary.

wing rarely falcate or angular; hindwing with the exterior margin slightly excavated. Body generally slender; eyes large; proboscis well developed; palpi slender, apart, very short; antennæ of male sometimes broadly pectinated, sometimes merely incrassated; legs rather short, never pilose, hind tibiæ often incrassated.

Larva rather short, slightly thick, not attenuated at the ends; with distinct lines and spots. Lives exposed on trees or shrubs. Pupa short and obtuse, in a slight web amongst trees.

Remark.—No species of this family, of which the European *Abraxas grossulariata* is a well-known representative, has yet been recorded from Ceylon.

Family LARENTIIDÆ.

Wings smooth, velvety or silky; not angular, rarely dentate. Forewing marked with undulating lines, which are often numerous. Body generally slender; proboscis conspicuous; palpi compressed, approximate, very generally porrect or incumbent, rostriform when they extend beyond the front; antennæ simple, sometimes pubescent or pectinate in the male, never plumose; legs smooth, slender, hind tibiæ not incrassated, very generally with four well-developed spurs.

Larva more or less elongated, sometimes slightly attenuated, cylindrical, or slightly flattened; mostly of a green colour, with distinct lines; head generally small and globular. Lives either exposed or in folded leaves on trees or low plants, sometimes in the seeds of plants. Pupa enclosed in an earthen cocoon or amongst leaves.

Genus LARENTIA.

Larentia, Treitschke, Schmett. Eur. v. 2, p. 440 (1825); *id.* vi. 2, p. 75 (1828); Duponchel, Catal. Lep. Fr. vii. 2, p. 111 (1829); *id.* viii. 1, p. 360 (1830); Boisduval, Ind. Méth. p. 204 (1840); Guénee, Phal. ii. p. 271 (1857); Walker, Catal. Lep. Het. B. M. xxiv. p. 1169 (1862).

Glaucopteryx, Hübner, Verz. bek. Schmett. p. 332 (1825-7).

Aplocera, Stephens, Catal. ii. p. 141 (1829); *id.* Illust. Haust. iii. p. 295 (1831).

Male. Forewing triangular, rather long, apex obtuse; cell more than half the length; first subcostal at nearly one-third before end of cell; second close to end, joined to first for a short distance from near its base, trifid; fifth from end, slightly touching second above its juncture with first; sixth also from end of cell; discocellular concave, radial from its middle; the middle median near end, lower at one-third: hindwing short, broad; exterior margin very convex; costal and subcostal joined from near base to near end of cell; two subcostals on a footstalk about one-fourth beyond end of cell; discocellular bent outward above the middle, radial from below the middle; the middle median nearly one-fifth, lower at two-fifths.

Body slender; abdomen not extending beyond hindwings; palpi porrect, rather small, laxly squamous, apex short, obtuse; antennæ filiform; legs long, spurs slender.

Type, L. cæsiata.

LARENTIA PERFICITA.

Lusia perficita, Walker, Catal. Lep. Het. B. M. xv. p. 1809 (1858), ♀.
Larentia comprensata, Walker, Catal. Lep. Het. B. M. xxvi. p. 1703 (1862), ♂.

Brownish-cinereous. Forewing crossed by a narrow subbasal, and a broad medial purplish cinereous-brown dentated band, the latter traversed by paler-centred brown dentate lines, and enclosing a slender black cell-spot; the interspace between the bands and also the outer border of the medial band traversed by a brown dentated line; the broad outer-marginal area also traversed by diffused brown dentated lines and a submarginal white sinuous line: hindwing darker brownish-cinereous, with wavy paler transverse fasciæ and submarginal distinct cinereous-speckled lunules. Cilia alternated with black. Body stout, cinereous and brown-speckled; side of palpi, and bands on legs dark brown.

Expanse $1\frac{4}{10}$ inch.

Ceylon.

Genus EUPITHECIA.

Eupithecia, Curtis, Brit. Ent. ii. fol. 64 (1825); Stephens, Catal. ii. p. 144 (1829); Illust. Haust. iii. p. 279 (1831); Boisduval, Ind. Méth. p. 208; Duponchel; Lederer; Guénee; Phal. ii. p. 298; Walker, Catal. Lep. Het. B. M. xxiv. p. 1210.
Chloroclystis et *Tephroclystia*, Hübner, Verz. p. 323 (1825-7).
Dyscymatoge et *Trachia*, Hübner, *id.* p. 324.
Leucocora, *Arcyonia* et *Eucymatoge*, Hübner, *id.* p. 325.

Forewing long, narrow, triangular, apex convex; cell half the length; first subcostal at one-fourth before end of cell, quadrifid, fifth from end, very slightly touching second close to its base; sixth also from end of cell; discocellular very oblique, concave, radial from its middle; the middle median very close to end, lower at nearly one-third: hindwing obovate; cell half the length; two subcostals on a footstalk at one-fourth beyond the cell; discocellular outwardly-concave, radial from above its middle; the middle median near end of cell, lower fully one-third. Body rather stout; palpi decumbent, stout, extending half beyond the head, laxly squamous, apex obtuse; antennæ very minutely pubescent in front; legs roughly squamous, hind tibiæ with two pairs of spurs.

Type, E. absynthiata.

EUPITHECIA POLYCLEATA.

Botys Polyclealis, Walker, Catal. Lep. Het. B. M. xix. p. 998 (1859), ♀.

Female. Cinereous-brown; cilia cinereous-ochreous. Forewing crossed by an

excurved black antemedial sinuous line, and a postmedial angulated line; both outwardly bordered by a cinereous-white line, of which the latter is more prominent; traces also of a pale sinuous submarginal line: hindwing with a less distinct discal angulated line, but with broader pale outer border to the indented parts only; a pale ochreous-white submarginal sinuous fascia, which is broadest in its middle. Front of head, and palpi blackish; forelegs with brown bands.

Expanse $\frac{3}{10}$ inch.

Ceylon.

EUPITHECIA PALPATA (Plate 206, Fig. 6, ♀).

Cidaria palpata, Walker, Catal. Lep. Het. B. M. xxv. p. 1404 (1862).

Male and female. Forewing sap-green; crossed by five broad sinuous-bordered blackish-speckled fasciæ, the outer borders of which are white-edged; a black lunular spot at end of the cell; cilia brownish-ochreous with square black spots: hindwing cinereous, crossed by very indistinct blackish denticulated fasciæ and a marginal band, the latter traversed by a sinuous white submarginal line. Cilia ochreous, with black spots. Body and palpi sap-green, black-speckled; legs cinereous, with black bands.

Expanse $\frac{9}{10}$ inch.

"Newra Eliya" (*Mackwood*).

EUPITHECIA VARIEGATA (Plate 206, Fig. 5).

Forewing crossed by alternate sap-green and purplish-red fasciæ, of which the antemedial and postmedial are angulated and blackish-edged; a black lunular spot at end of the cell: hindwing cinereous. Body and palpi sap-green; abdomen with purple-red bands; legs with brown bands.

Expanse $\frac{8}{10}$ inch.

Ceylon.

EUPITHECIA VIRESCENS (Plate 206, Fig. 4).

Forewing dull sap-green; crossed by a nearly straight basal and antemedial, an angulated postmedial and a submarginal brown-speckled blackish-edged fascia: hindwing cinereous. Cilia of both wings ochreous, with dusky-brown spots. Body and palpi dull sap-green; legs with dusky-brown bands.

Expanse $\frac{8}{10}$ inch.

Ceylon.

EUPITHECIA ATTENUATA (Plate 206, Fig. 3, ♂).

Purpurescent cinereous-brown. Forewings crossed by a basal, subbasal, antemedial, postmedial, and a less defined submarginal slender whitish-denticulated angulated line; the latter with a larger dentate white mark below the middle:

hindwing with similar, curved, denticulated lines. Cilia brownish-cinereous. Forelegs with dark brown bands.

Expanse $\frac{8}{10}$ inch.

Ceylon.

Genus CALLUGA.

Male. Forewing triangular; costa with a protuberance in front near the base, exterior margin oblique, even; cell about half the length; costal vein recurved upward; subcostal bent somewhat downward at two-fifths from the end of the cell; first subcostal from the angle, curving sharply downward and slightly touching the second at half its length; second from end of cell, trifid; fifth also from end of cell; discocellular slender, inwardly-oblique, slightly concave, radial from the middle; the middle median very close to end of cell, lower at about one-third; submedian much recurved: hindwing short, exterior margin convex, sinuous; cell half the length, broad; subcostal joined to costal from near base to near end of cell; two subcostals from end of cell; discocellular slender, radial from the middle; two upper medians from end of the cell, lower at one-third. Body slender, anal tuft cleft; front pointed; palpi porrect, extending beyond the front, squamous, apex short, blunt; antennæ rather thick, flattened, shaft above rough; legs slender; fore tibia tufted; middle tibia with a pair of slender spurs, the outer very short; hind tibia slender, with one pair of spurs, the outer very long, inner extremely short.

Allied to *Phrissogonus* (Butler, Ann. N. H. ix. p. 94 (1882).

CALLUGA COSTALIS (Plate 206, Fig. 1, ♂).

Whitish-ochreous. Forewing with the costa convexly produced before the middle; crossed by a curved basal and antemedial, and an angulated postmedial dark purplish-brown line, followed by an interrupted attenuated submarginal fascia; the upper interspace between the antemedial and discal line clouded with purplish-brown: hindwing with similar lines, and outer fascia. Cilia with a brownish inner line. Legs with brown bands.

Expanse $\frac{8}{12}$ inch.

Genus IRAMBA.

Allied to Calluga.

Male. Forewing triangular; costa not produced in front; cell half the length; first subcostal at two-fifths before end of cell, curved downward and joined to second for some distance along its middle; second trifid: hindwing short, exterior margin convex, even. Palpi narrow, obliquely-porrect; antennæ slender, setaceous; fore tibia slightly tufted, middle and hind tibiæ thick, both with a short thick dilated tuft at the end, apical spurs slender, outer spur short.

Type, I. tibialis.

IRAMBA TIBIALIS (Plate 206, Fig. 2, ♀).

Ochreous-yellow. Forewing crossed by a broad medial purple-red band outwardly edged by a black-speckled angulated line; base of the costa also red-speckled; a less defined submarginal sinuous reddish fascia; a blackish streak extending from end of the cell to the costa: hindwing with a medial purple-red band outwardly edged by a curved black line, followed by a less defined submarginal reddish fascia. Body red-speckled; forelegs and tarsi with blackish bands; middle and hind tibiæ of male with a dilated tuft of black hairs at the tip.

Expanse $\frac{8}{12}$ inch.

Ceylon.

IRAMBA RECENSITARIA.

Eupithecia recensitaria, Walker, Catal. Lep. Het. B. M. xxiv. p. 1244 (1862).

Cinereous-ochreous. Forewing crossed by a subbasal, medial, postmedial, and a submarginal broad brown denticulated band, each with a pale bordering-line; and with a few irregularly disposed black scales: hindwing with a similar medial, discal, and submarginal band. Palpi black tipt; forelegs with brown bands.

Expanse $\frac{6}{12}$ inch.

Ceylon.

IRAMBA IMMIXTARIA.

Eupithecia immixtaria, Walker, Catal. Lep. Het. B. M. xxiv. p. 1244 (1869).

Brownish-cinereous. Forewing crossed by an inwardly-oblique black-speckled denticulated antemedial line, and a postmedial angulated line, followed by a very indistinct submarginal sinuous fascia: hindwing with a similar discal line and submarginal fasciæ. Palpi blackish; forelegs with brown bands.

Expanse $1\frac{6}{12}$ inch.

Ceylon.

IRAMBA ADMIXTARIA.

Eupithecia admixtaria, Walker, Catal. Lep. Het. B. M. xxiv. p. 1243 (1862), ♀.

Female. Pale brownish-ochreous. Forewing crossed by an excurved antemedial brown-bordered black sinuous band, and an angular discal band, which is outwardly-oblique and straight from the costa to the angle and slenderly denticulated hindward; intermedial area crossed by a sinuous brown line, basal area by three diffuse lines, and the outer area by a slender line parallel to the discal band, followed by a broad fascia traversed by a submarginal sinuous pale line: hindwing with a similar subbasal and angular discal band, medial line, outer discal line, and marginal fasciæ. Abdomen with a broad brown basal band; palpi, and forelegs above brown.

Expanse $\frac{6}{8}$ inch.

Ceylon.

Genus COLLIX.

Collix, Guénee, Phal. ii. p. 357 (1857); Walker, Catal. Lep. Het. B. M. xxiv. p. 1247 (1862).

Forewing oblong, widened towards the end, apex pointed; with a raised tuft of scales at end of the cell; cell about half the length; first subcostal at nearly half, second close to end, anastomosed to first for some distance from near its base, third from end, anastomosed in its middle to the second, trifid, sixth from end of the cell; discocellular deeply concave, radial from its middle; the middle median close to end, lower at one-third: hindwing short, exterior margin acutely dentated; cell about half the length; subcostal anastomosed to the costal from near base to near end of cell; two subcostals on a footstalk about one-third beyond end of cell; discocellular outwardly-oblique, concave, radial from above the middle; the middle median very close to end of cell, lower at one-third. Body moderately stout, abdomen hardly extending beyond hindwings; palpi porrect, extending more than half beyond the head, convergent at the tip, rostriform, rather broad laterally, flattened, clothed with short hairy scales, third joint short, very obtuse; antennæ filiform, thickish, flattened; legs smooth; middle tibiæ in male inflated, spurs slender, outer very long; hind tibæ not thickened, with two pairs of long slender unequal spurs.

Type, C. hypospilata.

COLLIX HYPOSPILATA (Plate 206, Fig. 8).

Collix hypospilata, Guénee, Phal. ii. p. 358 (1857); Walker, Catal. Lep. Het. B. M. xxiv. p. 1248 (1862).

Dark cinereous-brown. Wings crossed by basal, discal, and submarginal blackish sinuous bands; the submarginal band with a distinct pale ochreous outer border, which is dentated in the male and lunular in the female; veins exteriorly lined with pale and black points; cilia also with a pale point from end of each vein; cell spot black, large and oval in the forewing, small in the hindwing. Underside pale cinereous ochreous-brown, each wing with a prominent black cell spot, discal fascia, and a submarginal row of four upper and two lower spots. Body and palpi speckled with dark brown; forelegs with dark brown bands.

Expanse, ♂ ♀ $1\frac{3}{10}$ to $1\frac{4}{10}$ inch.

Ceylon.

COLLIX GHOSHA (Plate 206, Fig. 9, 10, ♂ ♀; 10*a*, larva).

Collix Ghosha, Walker, Catal. Lep. Het. B. M. xxiv. p. 1249 (1862).

Dark cinereous-brown. Wings crossed by basal, a discal, and a submarginal pale-bordered blackish sinuous band; cell spot distinct, black, smallest in the hindwing. Underside pale cinereous. Both wings with a large black cell spot, a broad diffuse discal fascia, and an interrupted submarginal band. Body, and palpi brown

speckled; forelegs with dark brown bands. Some specimens of the female have a slender discal spot in both wings, and the markings on the underside are also distinctly narrower.

Expanse 1 to $1\frac{1}{10}$ inch.

Ceylon.

Larva looped; with 10 legs; dark olive-green. Pupa reddish, with greenish head and wing cases.

COLLIX (?) CONTRIBUTARIA.

Collix (?) contributaria, Walker, Catal. Lep. Het. B. M. xxiv. p. 1249 (1862).

"Male. Cinereous brown, more cinereous beneath. Wings narrow; interior and exterior lines black, undulating, slightly denticulated; submarginal line pale, denticulated, almost obsolete. Forewings rounded at the tips, exterior border extremely oblique. Vertex flat; palpi very short; antennæ stout, convoluted, about half the length of the body, abdomen extending very little beyond the hindwings; legs bare, rather slender, spurs long.

"Expanse 9 lines."

Ceylon. In Mr. E. L. Layard's collection.

Genus REMODES.

Sauris, Guénee, Phal ii. p. 361 (1857), ♀; Walker, Catal. Lep. Het. B. M. xxiv. p. 1251, ♀.
Remodes, Guénee, Phal. ii. p. 362 (1857), ♂; Walker, Catal. Lep. Het. B. M. xxiv. p. 1253, ♂.

Male. Forewing long, costa regularly arched, apex not acute, exterior margin very oblique, slightly convex, and with a very slight cleft above and below end of the lower median, the middle lobe being concave and laxly scaled beneath; posterior margin straight; cell nearly half the length; first subcostal at one-third before end of cell, quadrifid, fifth from end of cell and slightly touching second close to its base, sixth also from end of cell; discocellular outwardly-oblique, recurved, radial from above its middle; the middle median about one-sixth before end of cell, lower at two-fifths; submedian slightly recurved: hindwing small, short, narrow, exterior margin contracted, cleft and folded below the apex and before the posterior angle, the middle lobe being produced, concave beneath and with a covering of short fine hairy scales; cilia long; cell very short, less than one-third the length; subcostals from beyond end of cell; subcostals and medians much curved and partly hidden in the folds. Body slender; abdomen extending more than half beyond the hindwings; palpi porrect, contiguous, very long, flat, squamous, thrice longer than the head, third joint subulate, naked, one-third as long as second; antennæ stout, thickest and flattened along the middle, scaly above, very minutely pubescent in front; fore and middle legs very long, slender, smooth; fore tarsi extremely long; middle tibiæ with a pair of slender unequal spurs; hind legs aborted; hind tibiæ clothed with fine long hairs, which almost cover the tarsi.

Female. Hindwings of normal shape, antennæ and palpi similar to those in male; hind legs long, smooth; hind tibiæ with one pair of slender unequal spurs.

Type, R. abortivata.

REMODES HIRUDINATA.

Sauris hirudinata, Guénee, Phal. ii. p. 362 (1857), ♀; Walker, Catal. Lep. Het. B. M. xxiv. p. 1252.

Female. Forewing olive-green; crossed by four well-defined alternate dark olive-green and pale pinkish-cinereous sinuous bands, and four similar discal bands, followed by an outer discal fascia, a submarginal macular fascia, and a row of marginal spots; the middle portion of the green bands, two spots on the outer discal band, the submarginal and marginal spots being purplish-brown: hindwing pale pinkish-cinereous. Thorax, head, and palpi olive-green; abdomen and legs cinereous-ochreous; forelegs above brown.

Expanse $1\frac{2}{10}$ inch.

Ceylon.

REMODES REMODESARIA (Plate 207, Fig. 3, ♂; 2, 5, ♀).

Sauris remodesaria, Walker, Catal. Lep. Het. B. M. xxiv. p. 1253 (1862), ♂.

Forewing pale olive-green; crossed by subbasal, medial and discal purplish-brown sinuous lines, followed by submarginal dentate marks and a marginal row of spots; a slight lunule at end of the cell; interspaces between the lines pale cinereous: hindwing cinereous; exterior margin of male cleft and folded below the apex and above the posterior angle, the middle lobe being cinereous-brown and covered beneath with brown hairy scales. Thorax, head, and palpi olive-green; abdomen, and legs cinereous; forelegs brown above; antennæ blackish.

Expanse, ♂ ♀ $1\frac{1}{10}$ inch.

Ceylon.

REMODES PROBOSCIDARIA (Plate 207, Fig. 6, ♀).

Sauris proboscidaria, Walker, Catal. Lep. Het. B. M. xxiv. p. 1252 (1862), ♀.

Female. Forewing olive-green; crossed by four narrow zigzag purple-black inner bands, and six outer denticulated bands, a submarginal sinuous band, and a marginal row of spots; a slender black oblique spot at end of the cell: hindwing brownish-cinereous. Thorax, head, and palpi, olive green; abdomen, and legs brownish-cinereous, forelegs darker brown.

Expanse $1\frac{2}{8}$ inch.

Ceylon.

REMODES NIGRIPALPATA.

Sauris nigripalpata, Walker, Catal. Lep. Het. B. M. xxiv. p. 1252 (1862), ♀.

Forewing olive-green; crossed by four or five purple-black angulated inner lines, and five discal lines, an outer discal less defined line, a submarginal row of dentate spots, and a marginal row of small spots; both series of lines with paler

purplish-brown interspaces; a large black linear spot at end of the cell: hindwing, and abdomen, and legs pinkish-cinereous; palpi blackish.

Expanse $1\frac{2}{10}$ inch.

Ceylon.

REMODES TRISERIATA (PLATE 207, FIG. 1, ♂; 4, ♀).

Forewing broader than in *R. remodesaria;* pale ochreous-green; crossed by two subbasal, two medial, and three discal purple-brown angulated lines, followed by some very ill-defined submarginal points, and a marginal row of spots; a slight lunule at end of the cell: hindwing whitish-cinereous; exterior margin of male cleft and folded below the apex and above the posterior angle. Thorax, head, and palpi pale ochreous-green; abdomen and legs cinereous; antennæ blackish.

Expanse, ♂ $\frac{9}{10}$, ♀ $1\frac{2}{10}$ inch.

Ceylon.

Genus ANTICLEA.

Anticlea Stephens, Illust. Haust. iii. p. 236 (1831); Catal. Brit. Lep. B. M. p. 193 (1850); Guénee, Phal. ii. p. 404 (1857); Walker, Catal. Lep. Het. B. M. xxv. p. 1299 (1862).

Mesoleuca (part), Hübner, Verz. p. 326.

Amæbe (part), Hübner, Verz. p. 333.

Larentia (part), Treitschke; Duponchel.

Forewing rather long, triangular; cell fully half the length; first subcostal at nearly one-third before end of cell; second close to end, joined to first for a short distance from near its base, trifid; fifth from end, slightly touching second beyond its juncture with first; sixth also from end of cell; discocellular slightly concave, radial from above its middle; the middle median very close to end, lower at two-fifths: hindwing rather long, exterior margin slightly convex; cell half the length; costal and subcostal joined to near end of cell; discocellular bent outward above the middle, radial from below the middle; the middle median near end, lower at fully two-fifths. Body short, slender; palpi porrect, projecting half beyond the head, compactly clothed with stout hairy scales, apex broad and obtuse; antennæ stout, flattened, filiform; legs slender, spurs slender (*A. berberata*).

ANTICLEA OCCLUSATA (PLATE 207, FIG. 7, 8, ♂ ♀).

Cidaria occlusata, Felder et Rogenh. Novara Voy. Lep. v. pl. 132, fig. 16 (1875), ♂.

Male. Cupreous-red. Forewing with a broad curved basal and an irregular angulated discal dark cupreous-brown band; the interspace between the basal and discal band more or less greyish red; both bands edged by a pale-bordered black line; the discal band traversed by an erect whitish stripe, and with an outer parallel grey-bordered blackish sinuous line, which is dilated at the costal end; a small black spot at end of the cell: hindwing cupreous-red; abdomen with black

triangular dorsal bands. Thorax, head, palpi above and forelegs dark brown; palpi beneath red. Female. Forewing with the broad curved basal pale-edged band and inner part only of the discal band dark-brown, the interspace between the two bands more or less pale greyish-red, the outer half of the wing being also more or less greyish-red, sometimes grey, and crossed by denticulated brown lines, the angulated pale-bordered black outer-line of the discal band, and the submarginal sinuous line dilated at the costal end and indistinct hindward; black spot at end of cell prominent.

Expanse, ♂ 1, ♀ $\frac{9}{10}$ to $1\frac{3}{10}$ inch.

Ceylon (*Mackwood*).

"Punduloya" (*Green*).

Genus PLEMYRIA.

Plemyria, Hübner, Verz. bek. Schmett. p. 334 (1825-7).
Phibalapteryx (part), Stephens, Ill. Haust. iii. p. 255.
Camptogramma (part), Guénee; Walker.

Male. Forewing triangular; cell more than half the length; first subcostal at one-third before end of cell, quadrifid, fifth from angle immediately before the end, touching second above its base, sixth from the end; discocellular very slender, concave, radial from the middle; the middle median close to end of cell, lower at one-third: hindwing broad, apex convex, exterior margin convex in the middle; cell nearly half the length, broad; two subcostals at one-third beyond the cell; discocellular concave, lower end oblique, long, radial from above the middle; two upper medians from end of cell, lower at one-fourth. Body slender, short; palpi porrect, broad, pointed in front, very laxly clothed beneath, extending two-thirds beyond the head; antennæ biciliated; legs slender, hind tibiæ with two pairs of slender spurs.

Type, P. fluviata.

PLEMYRIA BACCATA (Plate 206, Fig. 7).

Camptogramma baccata, Guénee, Phal. ii. p. 430 (1857); Walker, Catal. Lep. Het. B. M. xxv. p. 1327 (1862).
Cidaria peracutata, Walker, Catal. Lep. Het. B. M. xxv. p. 1421 (1862).

Forewing cinereous-ferruginous; crossed by a subbasal, antemedial, medial, discal, and a submarginal slender white-bordered blackish denticulated line; the area between the antemedial and medial line dusky-cinereous, within which is a large white spot at end of the cell: hindwing dusky-cinereous, with indistinct darker slightly whitish-bordered lunular fasciæ. Forelegs with blackish bands.

Expanse $\frac{8}{10}$ inch.

"Punduloya."

Allied to the European *P. gemmata*.

Genus CAMPTOGRAMMA.

Camptogramma, Stephens, Illust. Haust. iii. p. 263 (1831); Catal. Brit. Lep. B. M. p. 209 (1850); Guénee, Phal. ii. p. 426 (1857); Walker, Catal. Lep. Het. B. M. xxv. p. 1323 (1862).
Plerocymia (part), Hübner, Verz. p. 330.

Forewing short, triangular; apex pointed, exterior margin waved; cell less than half the length; first subcostal at one-third before end of cell, quadrifid; fifth from end, very slightly touching second above its base; sixth also from end of cell; discocellular bent, radial above the middle; the middle median very close to end of cell, lower at one-third: hindwing short, broad, exterior margin waved, almost angular in the middle; cell one-third the length; costal and subcostal joined from near the base to near end of cell; two subcostals on a footstalk at a short distance beyond end of cell; discocellular outwardly-oblique, concave, radial from its middle; the middle median from close to end, lower at one-third. Body slender; abdomen not extending beyond the hindwings; palpi porrect, rostriform, very laxly squamous, apex minute, pointed; antennæ filiform, minutely pubescent in front; legs slender, squamous, spurs long, slender.

Type, C. bilineata.

CAMPTOGRAMMA BLITEARIA.

Camptogramma blitearia, Walker, Catal. Lep. Het. B. M. xxvi. p. 1716 (1862), ♀.

"Female. Cinereous, with a testaceous tinge; minutely speckled with black. Wings with three slightly undulating more or less diffuse brownish lines; first and second lines reflexed towards the costa, submarginal line occasionally widely interrupted and diffuse; a black discal point in each wing; marginal points also black. Forewing falcate, with very acute tips; exterior border undulating.

"Expanse 11 to 12 lines."

Ceylon. In Mr. E. L. Layard's collection.

Genus EUSTROMA.

Eustroma, Hübner, Verz. bek. Schmett. p. 335 (1825-7).
Steganolophia, Stephens, Catal. ii. p. 135 (1829); Illust. Haust. iii. p. 232 (1831).
Cidaria (part), Treitschke; Duponchel; Lederer; Guénee; Walker.

Male. Forewing rather broad, triangular; costa arched at base, apex pointed, exterior margin slightly convex and oblique; cell fully half the length; first subcostal at nearly one-fourth, second at one-eighth, trifid, joined to first for some distance from its base; fifth and sixth from end of cell, fifth touching second beyond its juncture with the first; discocellular concave, outwardly-oblique, radial from above its middle; the middle median near end, lower at nearly one-third; a lengthened tuft of long hairs projecting forward from below middle of the submedian on underside of the wing: hindwing bluntly ovate; cell two-fifths the length; two

subcostals on a footstalk half beyond the cell; discocellular outwardly-concave, radial from its middle; the middle median near end of cell, lower at nearly one-third. Body short; palpi porrect, projecting half beyond the head, broad, stoutly pilose, tip pointed; antennæ distinctly articulated, minutely pubescent in front; legs very laxly scaled, hind tibiæ with two pairs of spurs.

Type, E. reticulata.

EUSTROMA DISSECTA (Plate 207, Fig. 9, ♀).

Forewing purplish ochreous-brown; crossed by a slender ochreous-white curved basal and antemedial line, an outwardly-curved medial line, which joins a discal line above the posterior angle, a curved line from middle of the posterior margin, some wavy submarginal lines with zigzag lower ends, and a curved upper marginal line; the lines thus disposed forming two basal bands, an upper and lower discal band, and two narrow apical bands; the basal bands being traversed by a pale-bordered darker brown line, and the discal bands by brown ringlet markings: hindwing pale purplish-ochreous, the base ochreous-white; crossed by a discal slender ochreous-white line, and submarginal lunules; marginal line dark brown; inner marginal broken line and adjacent cilia ochreous-white. Body purplish ochreous-brown, with ochreous-white segmental edges; front of head, palpi, and legs ochreous-white; side of palpi and legs above brown speckled.

Expanse $1\frac{7}{10}$ inch.

Ceylon. From Mr. F. M. Mackwood's colection.

Genus LAMPROPTERYX.

Lampropteryx, Stephens, Illust. Haust. iii. p. 233 (1831).
Eustroma (part), Hübner.
Cidaria (part), Treitschke; Duponchel; Boisduval; Guénee; Walker.

Forewing triangular; costa arched at the base, apex pointed; cell fully half the length; first subcostal at two-fifths before end of cell, second close to end, joined to first for a short distance, trifid, fifth from end of cell, touching second beyond its juncture with the first; discocellular outwardly-concave, radial from the middle; the middle median close to end of cell, lower at one-third: hindwing with apex and exterior margin convex; cell fully half the length; subcostal joined to costal from near base to near end of cell; two subcostals at one-third beyond the cell; discocellular bent above and below the middle, radial from lower angle; middle median near end of cell, lower at one-third. Body slender, anal tuft lax; palpi porrect, stout, projecting a little beyond the head, hirsute beneath, third joint short, pointed; antennæ subserrated, biciliated; legs moderately slender, long, squamous, middle and hind tibial spurs long.

Type, L. suffumata.

LAMPROPTERYX MOLATA (Plate 207, Fig. 11, 12, ♂ ♀).

Cidaria Molata, Felder et Rogenh. Novara Voy. Lep. v. pl. 132, fig. 23 (1875), ♂.

Male. Forewing cupreous-brown; crossed by an excurved subbasal, antemedial, and an irregular angulated sinuous postmedial black line; the two former whitish-edged, the latter bordered by a parallel black-edged white fascia, which is traversed by a slender black line, and is followed by a submarginal blackish lunular fascia bordered by a white line; medial area with a black-lined white reniform spot at end of the cell, below which are some black ringlets; the centre of the cell-spot sometimes brown: hindwing brownish-cinereous, palest at the base, with a marginal row of small brown points. Thorax, head, and palpi brown, speckled with white; bands on fore and middle legs brown; abdomen cinereous, with brown dorsal triangular bands. Female. Forewing with the middle area cinereous-brown, discal lines less defined and narrower white-edged; cell-spot brown.

Expanse 1 to $1\frac{2}{10}$ inch.

"Punduloya" (*Mackwood* and *Green*).

LAMPROPTERYX CINGALA (Plate 207, Fig. 10, ♀).

Forewing brownish-ochreous; crossed by a broad dark greyish-brown curved basal band, an irregular angulated medial band, and a submarginal fascia traversed by a sinuous white line; the angulated outer border of the discal band with a whitish denticulated edge; the bands also crossed by indistinct black denticulated lines: hindwing and abdomen dark cinereous-brown; cilia ochreous. Thorax, palpi, fore and middle legs with dark brown bands.

Expanse 1 inch.

Dolosbagie; October (*Mackwood*). Punduloya (*Green*).

Family NYCTEOLIDÆ.

"Wings of moderate or small size. Forewing generally green. Antennæ simple. Body rather stout.

"Larva with 16 legs. Feeds exposed on the leaves of trees or between the terminal leaves of the twigs. Pupa in a firm boat-shaped cocoon." (*Stainton.*)

Genus EARIAS.

Earias, Hübner, Verz. bek. Schmett. p. 395 (1825-7).
Earis, Stephens, Illust. Haust. iv. p. 67 (1834).
Aphusia, Walker, Catal. Lep. Het. B. M. xii. p. 769 (1857).
Halias (part), Treitschke; Duponchel; Guénee.

Forewing elongate, rather narrow, costa slightly arched, apex pointed, exterior

margin hardly oblique; cell more than half the length; first subcostal at one-third before end of cell, second extremely close to the end, third from the end, bifid; discocellular deeply concave, radials from extreme upper and lower end; middle median near end of cell, lower at one-third; submedian straight: hindwing broad, apex and exterior margin convex; cell more than half the length; two subcostals from end of cell; discocellular concave; two upper medians on a footstalk at half beyond the cell; lower at one-fourth. Body short, stout; palpi porrect, rather slender, second joint projecting half beyond the head, squamous, third joint short, oval; proboscis long; antennæ setulose; legs rather short, stout; tibiæ thick; middle tibiæ with one pair and hind tibiæ with two pairs of slender spurs, the outer spur very long.

Type, E. chlorana.

EARIAS CHROMATARIA (Plate 208, Fig. 5).

Earias chromataria, Walker, Catal. Lep. Het. B. M. xxvii. p. 204 (1863).
Earias annulifera, Walker, Catal. Lep. Het. B. M. xxxv. p. 1774 (1866).

Forewing sulphur-green; with a reddish spot in middle of the cell and another at its end; base of costa also reddish; an angulated reddish-bordered purplish-brown marginal band; cilia also purplish-brown: hindwing white; apical margin and cilia tinged with sulphur-green. Thorax, head, base of palpi, and legs sulphur-green; abdomen greenish-white; base of antennæ, frontal tuft, side of palpi, and forelegs above tinged with red.

Expanse $\frac{7}{10}$ to $\frac{8}{10}$ inch.

Ceylon.

EARIAS SPEIPLENA (Plate 208, Fig. 6).

Aphusia speiplena, Walker, Catal. Lep. Het. B. M. xii. p. 770 (1857).
Micra partita, Walker, Catal. Lep. Het. B. M. xxxiii. p. 799 (1865).

Forewing olivescent-white; with a longitudinal medial grass-green fascia dilating from the base to the middle of exterior margin: hindwing olivescent-white; with a slender brownish marginal border. Body, palpi, and legs olivescent-white; middle of thorax grass-green; side of palpi, and forelegs above brownish.

Expanse $\frac{8}{10}$ to $\frac{9}{10}$ inch.

Ceylon. From Mr. F. M. Mackwood's collection.

EARIAS SULPHURARIA (Plate 208, Fig. 10).

Forewing dark sulphur-yellow; base of costa, and the cilia tinged with brownish-ochreous: hindwing white; apical border tinged with yellow. Thorax, head, base of palpi, middle and hind femora and tibia above yellow; palpi, forelegs above, and all the tarsi ochreous-brown; abdomen, and legs beneath yellowish-white.

Expanse $\frac{9}{10}$ inch.

Ceylon. From Mr. F. M. Mackwood's Collection.

Genus THAGORA.

Thagora, Walker, Catal. Lep. Het. B. M. xxvii. p. 205 (1863).

Forewing elongate, narrow, rectangular; cell nearly two-thirds the length; first subcostal at one-fifth before end of cell, second close to end, third from the end, bifid; discocellular very deeply concave, lower end prolonged, radials from extreme ends; middle median very close to end of cell, lower about one-half; submedian recurved from the base: hindwing rather long, apex somewhat produced; costal and subcostal vein anastomosed to two-thirds from the base, second subcostal at nearly half; discocellular absent; three median veins, two upper on a footstalk at half length beyond the lower. Body short, stout; head pointed in front; palpi porrect, apex decumbent, extending beyond the head, moderately slender, rather smooth, third joint half length of second; antennæ setaceous, basal joint stout; legs stout, laxly squamous, middle tibiæ with one pair and hind tibiæ with two pairs of long slender unequal spurs.

THAGORA FIGURANA.

Thagora figurana, Walker, Catal. Lep. Het. B. M. xxvii. p. 205 (1863), ♀.

Forewings bright grass-green; extreme base, costal edge, and cilia dull ochreous; with three lower discal irregular macular dull ochreous bands, the inner including a spot at end of the cell: hindwing whitish with an æneous tinge. Abdomen pale fawn-colour.

Expanse, ♂ $\frac{8}{10}$, ♀ 1 inch.

Ceylon.

Family TORTRICIDÆ.*

"Forewings broad, rarely twice as long as broad; costa regularly arched, never folded. Palpi short."

"Larva with 16 legs; generally active, feeding in united or rolled-up leaves, or in the roots and stems of plants." (*Stainton.*)

Genus TERAS.

Teras, Treitschke, Eur. Schmett. vii. p. 233 (1829).
Peronea,† Curtis, Brit. Ent. i. fol. 16 (1824).

TERAS DIVISANA.

Teras divisana, Walker, Catal. Lep. Het. B. M. xxviii. p. 296 (1863).

"Brownish-cinereous. Wings with numerous minute transverse brown

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* Lord Walsingham has very kindly examined and described the new species of this Family.

† Peronæa and Peronia previously used for genera of Mollusca.

streaks: forewing with a brownish patch, which occupies much more than half the exterior part of the costa, and forms an angle in middle of the disc, whence it is narrowed to the tip of the costa; a few black erect scales here and there in the disc and some black minute marginal points.

Expanse 10 lines."

Ceylon.

TERAS EXTENSANA.

Teras extensana, Walker, Catal. Lep. Het. B. M. xxviii. p. 296 (1863).

"Cinereous fawn-colour. Wings brown-speckled: forewing with a darker fawn-coloured costal stripe, which occupies more than half the exterior length of the wing, and nearly half its breadth; speckles here and there blackish; costa with four blackish marks along its exterior part: hindwings cinereous.

Expanse 12 lines."

Ceylon.

Genus CACŒCIA.

Cacœcia, Hübner, Verz. p. 388 (1825-7).
Lozotænia, Stephens, Catal. ii. p. 169 (1829); *id.* Ill. Haust. iv. p. 69 (1835).

CACŒCIA MICACEANA (Plate 208, Fig. 1).

Cacœcia micaceana, Walker, Catal. Lep. Het. B. M. xxviii. p. 314 (1863).

"Male. Ochraceous. Forewings spangled with chalybeous scales; two ferruginous interrupted bands, the first broader than the second; fringe ferruginous, except towards the interior angle; costa convex towards the base, slightly concave exteriorly; tips rounded, but prominent, exterior border not oblique, except by the interior angle: hindwings with the costa blackish towards the tip. Abdomen, hindwings, and underside brighter ochraceous; abdomen extending beyond the hindwings; palpi slender, obliquely ascending, not rising so high as the vertex; third joint very minute.

Expanse 9 lines."

Walker's type of this species is from Hongkong. It is recorded by Lord Walsingham from Poona, and Dharmsala, Punjab, in Proc. Zool. Soc. 1886, p. 881.

Genus DICHELIA.

Dichelia, Guénee, Ann. Ent. Soc. Fr. 1845, p. 141.

DICHELIA RETRACTANA (Plate 208, Fig. 11).

Dichelia retractana, Walker, Catal. Lep. Het. B. M. xxviii. p. 322 (1863.)

"Female. Cinereous. Wings with numerous minute transverse brown streaks, which are most apparent on the underside. Forewings acute, with two brown black-marked costal spots, one near the base, the other at two-thirds of the length; an

intermediate oblique brown partly black-bordered band, which joins the interior border at two-thirds the length of the latter, and thence emits a streak to the submarginal disc; two rows of transverse black points along the exterior border; costa convex towards the base; exterior border hardly convex, rather oblique: hindwings brownish-cinereous; fringe whitish-cinereous. Head, thorax, and forewings tinged with fawn-colour; palpi porrect, almost as long as the breadth of the head; second joint with a short thick fringe above, third very minute.

Expanse 10 lines."

Walker's type of this species is from Australia. Lord Walsingham has recorded it from Bombay, and Dharmsala, Punjab, in P. Z. S. 1886, p. 881.

Genus TORTRIX.

Tortrix, Linn. Syst. Nat. X. ed. i. p. 530 (1758); *id.* xii. ed. p. 875 (1767). Stephens, Ill. Haust. iv. p. 68 (1834).

Aphelia, Hübner, Verz. p. 390 (1825-7).

TORTRIX DETRACTANA.

Tortrix detractana, Walker, Catal. Lep. Het. B. M. xxviii. p. 326 (1863).

"Male. Pale fawn-colour. Forewing indistinctly tessellated with fawn-colour; a slightly darker nearly obsolete oblique middle band; two brown black-marked costal spots: hindwing cinereous towards the base.

Expanse 6 lines."

TORTRIX INVALIDANA.

Tortrix invalidana, Walker, Catal. Lep. Het. B. M. xxviii. p. 327 (1863).

"Male. Pale cinereous fawn-colour. Wings tessellated with brown: forewing with two brown oblique bands, which are most distinct on the costa and are obsolete hindward: hindwing cinereous, with a slight tinge of fawn-colour; markings indistinct.

Expanse 8 lines."

Ceylon.

TORTRIX AFFINISANA.

Tortrix affinisana, Walker, Catal. Lep. Het. B. M. xxviii. p. 328 (1863).

"Male. Cinereous fawn-colour, more cinereous beneath: forewing with fawn-coloured speckles; with a brown dot on the costa before the middle, and a brown oblique band, which extends from the costa to the hind part of the exterior border, and is narrower hindward: hindwing brownish-cinereous.

Expanse 6 lines."

Ceylon.

TORTRIX PUSILLANA.

Tortrix pusillana, Walker, Catal. Lep. Het. B. M. xxviii. p. 328 (1863).

"Female. Cinereous fawn-colour: forewing speckled with pale fawn-colour; a

fawn-coloured oblique band, which is concisely bordered on its inner side, and is widened hindward; a costal subapical fawn-coloured spot: hindwing cinereous, with darker speckles. Abdomen cinereous.

Expanse 5 lines."

Ceylon.

TORTRIX COFFEARIA.

Tortrix coffearia, Nietner, Observ. on the Enemies of the Coffee-tree in Ceylon, p. 24 (1861).

"Shaped like a perpendicular section of a bell. Light brown, clouded more or less with a darker tint of the same colour.

Expanse 1 inch."

Ceylon.

"Larva $\frac{3}{4}$ inch long, thick, nearly naked, greenish; head and thoracic plate brown. Found nearly all the year round, not exclusively upon coffee, but also upon a variety of garden plants, the leaves of which it draws together, residing within." (*Nietner.*)

Genus PENTHINA.

Penthina, Treitschke, Eur. Schmett. vii. p. 227 (1829).
Antithesia (sect. B), Stephens, Ill. Haust. iv. p. 89.

PENTHINA BRYANA.

Penthina bryana, Felder et Rogenh. Voy. Novara, Lep. v. pl. 137, fig. 54 (1875).

Forewing dark brown; crossed by an outwardly-oblique pale olivaceous antemedial band and a narrower irregular postmedial band; marginal line also olivaceous: hindwing purplish-cinereous. Body brown; front of thorax olivaceous.

Expanse $\frac{9}{12}$ inch.

Ceylon. "Rambodde" (*Nietner*).

Genus CNEPHASIA.

Sciaphila,* Treitschke, Eur. Schmett. vii. p. 233 (1829).
Cnephasia, Curtis, Brit. Ent. iii. fol 100 (1826). Stephens, Ill. Haust. iv. p. 126 (1834).

CNEPHASIA FLEXILINEANA.

Sciaphila flexilineana, Walker, Catal. Lep. Het. B. M. xxviii. p. 345 (1863).

"Brownish-cinereous. Forewing cinereous, partly clouded with brown; with minute and indistinct transverse brown streaks, and a few black scales; a brown subcostal stripe, limited in front by an irregular black line, the latter bordered in front by an irregular hoary line; marginal line brown, zigzag, here and there black; costa with black points: hindwing brown, fringe dark cinereous.

Expanse 9 lines."

Ceylon.

* Used in 1826 for a genus of Coleoptera.

Genus GRAPHOLITHA.

Grapholitha, Treitschke, Eur. Schmett. vii. 232 (1829).

GRAPHOLITHA OBTUSANA.

Grapholitha obtusana, Walker, Catal. Lep. Het. B. M. xxviii. p. 388 (1863).

"Female. Fawn-colour, mostly cinereous beneath. Forewing with a brownish discal spot, and a brownish oblique exterior band, beyond which there are some black points in the fore part of the disc; a slender whitish submarginal line; costa with oblique brown and whitish streaklets. Second joint of palpi with a short thick fringe above.

Expanse 6 lines."

Ceylon.

GRAPHOLITHA CONFERTANA.

Grapholitha confertana, Walker, Catal. Lep. Het. B. M. xxviii. p. 388 (1863).

"Female. Brown, with a cinereous tinge beneath: forewings with many transverse cinereous lines, of which those on the basal half are bent, and those on the exterior part are very irregular; a fawn-coloured patch near the tip of the costa, and another on the hind part of the exterior border; costa with oblique whitish streaklets. Palpi with two whitish bands.

Expanse 6 lines."

Ceylon.

Genus PLATYPEPLUS, Walsingham.

Head coarsely scaled. Antennæ about half the length of the forewings. Palpi short, slightly recurved, brush-like beneath, the apical joint small, obtuse. Thorax tufted posteriorly. Forewings elongate, with the costa and apical margins convex, the dorsal margin straight, but angulated near the base. Hindwings triangular, the abdominal margin much dilated, with a narrow pit-like recess extending two-thirds from the base towards the abdominal angle; this structure apparently corresponding to the free lobe in the genus *Eccopsis*, Zeller, but attached to the wing throughout. Neuration as in *Eccopsis*.

This genus differs from Carpocapsa in the approximation of the middle vein of the hindwings to the base of vein 4, resembling in this respect the genus Eccopsis, to which it is very nearly allied.

PLATYPEPLUS APROBOLA (Plate 208, Fig. 2).

Eccopsis aprobola, Meyrick, Trans. Ent. Soc. Lond. 1886, p. 275.

Head cinereous, with some brownish scales; palpi cinereous, tinged with brown externally; thorax greyish, mottled and tufted with brown posteriorly. Forewings densely and intricately mottled with steel-grey and brown, a whitish space extending from the base along the fold is merged in a pale cinereous patch on the middle of the

dorsal margin, above the outer edge of which is a ferruginous-brown space extending inwards to the costa and diffused in scattered spots to the dorsal margin before the anal angle; this space is preceded by two and followed by three reduplicated oblique white costal streaklets, which terminates in steel-grey lines extending outwards very obliquely; before the apex are two more single white streaklets in the dark brown costal margin; the fringes on the upper third of the apical margin are steel-grey merging into pale cinereous, and becoming almost white at the anal angle, above which a steel-grey, ill-defined, ocelloid patch is traversed and surmounted by dark brown lines and spots; fringes dark grey about the apex becoming almost white towards the anal angle. Hindwings pale brownish, with shining greyish-white fringes. Abdomen brown, anal tuft pale cinereous with a faint ochreous tinge.

Expanse of wings 19 mms.

Ceylon. "This identical species occurs also in Tahiti, whence I have specimens collected by Mr. J. J. Walker. Mr. Meyrick's types, in which a somewhat more ochreous colouring prevails are from Tonga." (*Walsingham.*)

Genus HOMONA.

Homona, Walker, Catal. Lep. Het. B. M. xxviii. p. 424 (1863).

"Male. Wings rather broad. Forewings rectangular at the tips; costa slightly convex, with a pouch near the base; exterior border convex and oblique hindward; interior border dilated and squamous towards the base. Body stout; proboscis short; palpi smooth, rather slender, obliquely ascending, not rising so high as the vertex, third joint conical, one-sixth the length of second; antennæ very minutely setulose; abdomen extending a little beyond the hindwings, apical tuft large, diverging; legs stout; hind tibiæ with four stout spurs."

HOMONA FASCICULANA.

Homona fasciculana, Walker, Catal. Lep. Het. B. M. xxviii. p. 424 (1863).

"Male. Fawn-colour. Forewings with an oblique darker streak, which widens from the disc to the apical part of the interior border, and is bordered with cinereous; covering of the pouch darker; a darker streak widening from middle of the costa to the tip, and bordered with ferruginous; a short broad oblique streak between the first streak and the pouch, deep black hindward. Abdomen, hindwings, and under side a little paler.

Expanse 8 lines."

Ceylon.

Family CHOREUTIDÆ.

Wings small. Forewings, in repose, slightly erected and partially covering the hindwings. Antennæ simple; palpi rather short, ascending.

Larva with 16 legs. Feeds on low plants, enclosed in a white web.

Pupa enclosed in a firm white cocoon.

Genus SIMAËTHIS.

Simaëthis, Leach, Edin. Enc. ix. p. 135 (1815). Samouelle, Ent. U. C. p. 254 (1819). Stephens, Ill. Haust. iv. p. 28 (1834).

Anthophila,* Haworth, Lep. Brit. p. 471 (1812).

Xylopoda, Latr. Fam. Nat. 476 (1825).

SIMAËTHIS BUTHUSALIS.

Simaëthis Buthusalis, Walker, Catal. Lep. Het. B. M. xxviii. p. 454 (1863).

"Male. Blackish. Forewings with three irregular whitish bands; second band broader than the first, composed of three spots, of which the hindmost is the largest; marginal dots deep black, each accompanied by a glittering chalybeous point: hindwings with two whitish spots, which form a widely interrupted band; a large exterior very pale fawn-coloured spot; marginal line whitish. Body white and shining beneath; legs white; tibiæ and tarsi with blackish bands.

Expanse 4 lines."

Ceylon.

SIMAËTHIS TAPROBANES.

Simaëthis taprobanes, Zeller, Horæ Soc. Ent. Ross. 1877, p. 178. pl. 2. f. 65.

Luteous-brown. Forewing with irregular transverse basal and medial ferruginous fasciæ, and some short longitudinal stripes on the exterior border; cilia alternated with ferruginous: hindwing with dilated ferruginous streaks from the base, and a transverse submarginal narrow fascia; cilia ferruginous.

Expanse 4 lines.

Ceylon.

SIMAËTHIS ELATELLA.

Simaëthis elatella, Walker, Catal. Lep. Het. B. M. xxviii. p. 455 (1863).

"Male. Cinereous-brown. Wings with an abbreviated exterior white line; marginal points metallic-purple or cupreous; fringe partly white: forewings with some slight transverse cinereous lines; reniform mark represented by an oblique brownish white-bordered streak, having a little longitudinal white streak behind it: hindwings with a large white discal streak.

Expanse $4\frac{1}{2}$ lines."

Ceylon. In Mr. E. L. Layard's Collection.

Family LIPUSIDÆ.

Genus MICROCOSSUS.

Female. Forewing long, narrow, ovate; cell fully two-thirds the length, disposed

* Used by Hübner (Tentamen, p. 2. 1806) for a genus of Lepidoptera.

towards the middle of the wing; first subcostal at one-half before end of the cell, second at about one-fifth, third near end, fourth from the end; discocellular inwardly-oblique, radials from near each end; two slender veinlets emitted within the cell, which are united at two-fifths from the end and then extend to the base; middle median near end of cell, lower about one-fifth; submedian recurved, and with a short lower basal branch: hindwing shorter than the forewing, lanceolate; cell about two-thirds the length; first subcostal from angle close to end; discocellular bent outward near upper end and inward close to lower end, radial from the lower angle; a slender veinlet extending within the cell from upper angle of the discocellular to the base; middle median near end of cell, lower at one-third; submedian and internal veins straight. Body extending beyond the hindwings, anal tuft lax, ovipositor exserted; palpi porrect, slightly curved, slender, very laxly clothed, not extending beyond the front; antennæ minutely and acutely serrated; legs stout, roughly squamous, middle tibia with one pair of spurs; hind tibia incrassated, with two pairs of spurs.

Closely allied to *Psilothrix* (*P. dardoinella*) of Southern Europe, the larva of both sexes of which lives, and pupates, within a twig-covered silken case, similar to those formed by the Psychidæ.

MICROCOSSUS MACKWOODII (Plate 208, Fig. 9, ♀).

Brownish-cinereous. Forewing crossed by several equidistant more or less continuous lines, which are composed of raised brown and black scales, a darker cluster of these scales also forming a patch about the middle of the cell; hindwing paler cinereous. Thorax, and base of abdomen greyish; anal tuft ochreous; front of head blackish; palpi and legs brownish.

Expanse $\frac{11}{12}$ inch.

Ceylon. From Mr. F. M. Mackwood's Collection.

Family TINEIDÆ.*

"Wings elongate; fringes very long. Head small, rough; labial palpi short and thick, often bristly; maxillary palpi generally extremely developed; antennæ variable, pectinated, ciliated, or simple, sometimes very long; proboscis rarely absent.

Larvæ with 16 legs, residing in a portable case, or feeding in fungi or decayed wood, in galleries lined with silk, or in the pith of the stems of grass." (*Stainton.*)

Genus HAPSIFERA.

Hapsifera, Zeller, Isis, 1847, p. 33.

Cimitra, Walker, Catal. Lep. Het. B. M. xxix. p. 779 (1864), ♀.

"Female. Wings dense, rather narrow; fringe long: forewings rounded at the

* Lord Walsingham has very kindly examined and described the new species in the group of Tineina.

tips, costa and exterior border hardly convex, the latter very oblique; veins much like those of Depressaria in structure. Body moderately stout; proboscis obsolete; palpi obliquely ascending, shorter than the breadth of the head, second joint pilose, slightly curved, third nearly linear, about half length of the second; antennæ smooth, rather stout; abdomen extending more than half beyond hindwings; legs smooth, moderately long and stout; hind tibiæ thinly fringed with very long hairs; spurs long." (*Walker.*)

HAPSIFERA SECLUSELLA (Plate 208, Fig. 12, 13, ♂ ♀).

Cimitra seclusella, Walker, Catal. Lep. Het. B. M. xxix. p. 780 (1864), ♀.

Male. Cinereous-ochreous: forewing rough, with many transversely disposed brown-scaled strigæ, and with a subbasal, and two medial oblique bands of prominent black-tipt raised scales; a marginal row of similar raised scales; cilia tipt with brown: hindwing brownish cinereous. Thorax, head, and sides of palpi with black-tipt scales; fore and middle legs with blackish bands. Female. Forewing with more defined and uniformly disposed brown strigæ, and with the black-tipt bands of raised scales.

Expanse, ♂ $\frac{7}{10}$, ♀ 1 inch.

Ceylon. From Mr. Mackwood's Collection.

Genus TINEA.

Tinea, Linn. Syst. Nat. X. ed. p. 534 (1758), *id.* xii. ed. p. 883 (1767). Fabr. Syst. Ent. p. 655 (1775); Latreille, Hist. Nat. xiv. p. 248 (1805); *id.* Consid. Gén. p. 364 (1810). Stephens, Ill. Haust. IV. p. 343 (1834). Zeller, Linn. Ent. vi. p. 84, 100 (1852). Stainton, Ins. Brit. Tineina, p. 24 (1854).

TINEA TAPETZELLA.

Phalæna (Tinea) tapetzella, Linn. Syst. Nat. 10 ed. p. 536 (1758), xii. ed. p. 888 (1767), Clerck, Icones, pl. xi. f. 12 (1759).

Tinea tapetzella, Müller, Faun. Ins. Frid. p. 56 (1764). Stephens, Ill. Haust. IV. p. 343 (1835). Stainton, Ins. Brit. Tineina, p. 28 (1854).

Tinea tapezella, Schiff, S. V. p. 142. Fabr. Ent. Syst. p. 659 (1775). Treitschke, Duponchel.

Tinea tapetiella, Zeller, Isis, 1839, p. 184.

"Forewings black from the base to the middle, white beyond; on the inner margin the black terminates very apruptly a little before the middle; on the costa, where it is continued further, the termination is less abrupt; apical portion of the wing clouded with dark grey, and there is a small black spot at anal angle, and two or three at the apex; cilia whitish, at the apex dark grey: hindwings pale grey, with whitish-grey cilia. Head and face white; palpi white, joints dark fuscous externally; antennæ fuscous. (*Stainton.*)

Expanse 9 lines."

Ceylon. (*Templeton; Nietner.*)

TINEA PELLIONELLA.

Phalæna (Tinea) pellionella, Linn. Syst. Nat. 10 Ed. p. 536, xii. ed. p. 888 (1767).

Tinea pellionella, Müller, Faun. Ins. Frid. p. 57 (1764). Fabr. Ent. Syst. p. 659 (1775) Treitschke. Stephens, Ill. Haust. IV. p. 345 (1834). Zeller, Isis, 1838, p. 708. Stainton, Ins. Brit. Tineina, p. 33 (1854).

"Forewings greyish-ochreous, with three rather obsolete fuscous spots, one on the disc, one rather beyond it on the fold before the middle, the other on the disc beyond the middle; there is sometimes a faint dark spot on the inner margin near the base; cilia unicolorous, pale greyish-ochreous: hindwings whitish-grey, with whitish-ochreous cilia. Head and face ochreous, slightly mixed with fuscous; palpi and antennæ fuscous. (*Stainton.*)

Expanse $5\frac{1}{2}$ to $6\frac{1}{2}$ lines."

TINEA GLABRELLA.

Tinea glabrella, Walker, Catal. Lep. Het. B. M. xxviii. p. 478 (1863).

"Female. Æneous fawn-colour, shining. Wings moderately broad, irridescent beneath; fringe with four blackish lines: forewings rounded at the tips, exterior border very oblique. Head pale ochraceous, pubescent; palpi brown, porrect, not extending beyond the head, third joint conical, minute; antennæ slender, rather shorter than the forewings; legs stout, smooth.

Expanse 12 lines."

Ceylon.

TINEA RECEPTELLA.

Tinea receptella, Walker, Catal. Lep. Het. B. M. xxviii. p. 479 (1863).

"Male. Ferruginous. Forewings acute, subfalcate, with black speckles, some of which are contiguous and form four small discal patches; costa hardly convex; exterior border very oblique. Underside and hindwings brown, tinged with purple. Head and palpi pilose; palpi porrect, shorter than the breadth of the head; third joint very minute; antennæ very slender.

Expanse 10 lines."

Ceylon.

TINEA IMPRESSELLA.

Tinea impressella, Walker, Catal. Lep. Het. B. M. xxviii. p. 479 (1863).

"Female. Pale cinereous fawn-colour. Forewings narrow, slightly acute, with an æneous tinge; a small paler impressed patch in the middle of the disc; exterior border almost straight, very oblique: hindwings cinereous. Head lanuginous, snow-white; palpi porrect, slightly deflexed, rather shorter than the breadth of the head, third joint acute, minute; antennæ rather stout.

Expanse 7 lines."

Ceylon.

TINEA FISSELLA.

Tinea fissella, Walker, Catal. Lep. Het. B. M. xxviii. p. 480 (1863).

"Female. Pale yellow. Forewings hardly acute, costa and exterior half brown; a brown spot contiguous to the oblique outline of the yellow part: hindwings cinereous. Head pubescent; palpi diverging, shorter than the breadth of the head; antennæ rather stout; thorax brown.

Expanse 5 to 6 lines."

Ceylon.

TINEA AMANDATELLA.

Tinea amandatella, Walker, Catal. Lep. Het. B. M. xxviii. p. 480 (1863).

"Male. Cinereous. Forewings narrow, rounded at the tips, thickly blackish-speckled; with a whitish oblong semihyaline discal spot; exterior border extremely oblique. Head whitish, lanuginous above; palpi smooth, slender, diverging, not longer than the breadth of the head; third joint lanceolate, much shorter than second; antennæ smooth, more than half length of the wings; abdomen extending very much beyond the hindwings; legs smooth.

Expanse 6 lines."

Ceylon.

TINEA PARVULELLA.

Tinea parvulella, Walker, Catal. Lep. Het. B. M. xxviii. p. 481 (1863).

"Male. Pale cinereous. Forewings narrow, slightly rounded at the tips; with some small æneous streaklets and with an æneous subapical patch; fringe long; exterior border very oblique. Head somewhat lanuginous above; palpi slightly diverging, a little shorter than the breadth of the head, third joint elongate-conical, minute; antennæ very minutely pubescent, about half length of the forewings; legs smooth.

Expanse $3\frac{1}{2}$ lines."

Ceylon.

TINEA INCONCISELLA.

Tinea inconcisella, Walker, Catal. Lep. Het. B. M. xxx. p. 1004 (1864).

"Female. Pale dull ochraceous. Forewings narrow, somewhat rough; hardly acute; with many minute transverse ferruginous streaks; several black scales, some of which form three dots, one basal, the other two in the disc before the middle, one of them near the interior border: hindwings pale cinereous. Palpi hardly ascending, extending a little beyond the head, second joint pilose, third lanceolate, much shorter than second; abdomen pale cinereous, extending much beyond the hindwings; oviduct exserted; antennæ rather stout; thorax very thickly black speckled.

Expanse 8 lines."

Ceylon.

TINEA ARENATELLA.

Tinea arenatella, Walker, Catal. Lep. Het. B. M. xxx. p. 1005 (1864).

"Female. Whitish cinereous, slender; forewings narrow, acute, irregularly blackish-speckled; speckles here and there confluent and forming small patches. Palpi slender, porrect, extending very little beyond the head, second joint fringed beneath, third lanceolate, as long as second; antennæ very slender, less than half length of the forewings; abdomen extending very much beyond the hindwings; legs smooth.

Expanse 6 lines."

Ceylon.

TINEA (?) EGENELLA.

Tinea (?) egenella, Walker, Catal. Lep. Het. B. M. xxx. p. 1005 (1864).

"Female. Cinereous, stout. Forewings rather short and broad, rounded at the tips; with many diffuse irregular brown dots; costa slightly convex towards the base; exterior border moderately oblique. Palpi obliquely ascending, not rising higher than the vertex; second joint pilose, third very short and slender; antennæ stout, very minutely setulose.

Expanse 6 lines."

Ceylon.

Genus MACHÆROPTERIS, Walsingham.

Head rough. Antennæ scarcely longer than the head and thorax, simple, with long diverging hairs beneath covering the second and third joints, forming conspicuous brush-like tufts. Maxillary palpi, none. Forewings ensiform, the costa much arched, the apex acute, somewhat falcate, the apical margin undulate, oblique, anal angle ill-defined. Hindwings slightly wider than the forewings, elongate, leaf-shaped, the apex acute and slightly falcate. Forewings with 12 veins; 2 and 3 from a common point, the others all separate; 7 ending in apex. Hindwings with 8 veins, all separate at base; 6 and 7 parallel.

MACHÆROPTERIS RECEPTELLA (Plate 208, Fig. 14).

Tinea receptella, Walker, Catal. Lep. Het. B. M. xxviii. p. 479 (1863).

"Male. Ferruginous. Forewings with black speckles, some of which are contiguous and form four small discal patches. Underside and hindwings brown, tinged with purple.

Expanse 10 lines."

Genus BLABOPHANES Zeller.

Blabophanes, Zeller, Linn. Ent. vi. p. 100 (1852).

BLABOPHANES LONGELLA (Plate 209, Fig. 1).

Tinea longella, Walker, Catal. Lep. Het. B. M. xxviii. p. 479 (1863).

"White. Head slightly tufted; palpi porrect, extending very little beyond the head, third joint elongate-conical, much shorter than the second; antennæ rather stout, much shorter than the forewings; hind tibiæ fringed. Wings rather narrow: forewings blackish chalybeous, rounded at the tips, with a broad white costal streak, which extends from before the middle nearly to the tip, and forms two slight angles on its hind side; exterior border extremely oblique: hindwings dark cinereous, with an æneous tinge.

Expanse 10 lines."

Genus ALAVONA.

Alavona, Walker, Catal. Lep. Het. B. M. xxviii. p. 514 (1863).

"Male. Wings rather narrow: forewings hardly acute; costa straight; exterior border moderately oblique; third inferior vein rather more distant from the fourth than from the third; body stout; proboscis obsolete; palpi stout, porrect, slightly pilose, much shorter than the breadth of the head, third joint elongate-conical, about half the length of second; antennæ moderately pectinated; abdomen extending somewhat beyond the hindwings; apical tuft rather large; legs stout; tibiæ pubescent; spurs very long."

ALAVONA TAPROBANA (Plate 208, Fig. 7, 8, ♂ ♀).

Male. Cinereous-brown: forewing numerously covered with dark brown scales, which are transversely disposed exteriorly, and there form broad strigæ, with more or less black tipt raised scales: hindwing and abdomen cinereous-brown. Head, antennæ, tip of palpi, and legs brownish-ochreous; base of palpi, and bands on fore and middle legs dark brown. Female. More uniformly brown: forewing with less defined darker tipt scales. Palpi and legs brown.

Expanse, ♂ $\frac{9}{10}$, ♀ $1\frac{4}{10}$ inch.

Ceylon. From Dr. Thwaites' Collection.

ALAVONA THWAITESII (Plate 208, Fig. 3, 4, ♂ ♀).

Male. Umber brown: forewing with the exterior border broadly from the apex, and the posterior border pale cinereous-brown; costal area with darker brown-tipt raised scales, which are disposed transversely in the form of strigæ: hindwing and abdomen pale cinereous brown. Palpi dark brown; head, antennæ, and legs pale brownish-ochreous; legs, including the tarsi with dark brown bands, which are

much paler on the hindlegs. Female. Forewing with the exterior and posterir border almost of the same brown colour as the anterior border. Palpi, and band on legs paler.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{8}{10}$ inch.

Ceylon. From Dr. Thwaites' Collection.

Family HYPONOMEUTIDÆ.

"Wings elongate, with moderate or rather short ciliæ. Head rough or smooth; labial palpi of moderate length; maxillary palpi absent; proboscis of moderate length, mostly naked.

Larva frequently gregarious, living in a common web." (*Stainton.*)

Genus HYPONOMEUTA.

Yponomeuta, Latreille, Hist. Nat. xiv. p. 250 (1802); *id.* Règ. An. iii. p. 579 (1817); Treitschke, Eur. Sch. ix. i. p. 208 (1832); Stephens, Ill. Haust. iv. p. 242 (1834); Zeller, Isis, 1839, p. 194.
Hyponomeuta, Zeller, Isis, 1844, p. 199.
Nygmia, Hübner, Verz. p. 412 (1825-7).

HYPONOMEUTA ALIENELLUS.

Hyponomeuta alienellus, Walker, Catal. Lep. Het. B. M. xxviii. p. 532 (1863).

"Male. Dark cinereous. Forewings with numerous minute black points: hindwings a little paler. Head with four black points; thorax with seven black points; abdomen extending much beyond the hindwings, with a large apical tuft and two long narrow apical appendages, which are curved downward; legs with a black point on each anterior femora and tibiæ.

Expanse 12 lines."

Ceylon.

Genus ATTEVA.

Atteva, Walker, Catal. Lep. Het. B. M. ii. p. 526 (1854).
Amblothridia, Wallengren, Resa Eugenie, v. p. 385 (1861).
Corinea, Walker, Catal. Lep. Het. B. M. xxviii. p. 542 (1863).

Male. Forewing long, apex rounded, exterior margin hardly oblique; cell four-fifths the length, bent downward at the end, disposed towards the middle of the wing; first subcostal at half before the end, second at one-eighth, third and fourth close to end, fifth from the end; discocellular inwardly-oblique, two radials at equal distances apart; a slender veinlet emitted within the cell from fourth subcostal and is joined to the subcostal at half way between the first and second branches; middle median from angle close to end of cell, lower at one-seventh; submedian with a lower basal branch at nearly one-third its length: hindwing long; cell two-thirds

its length, very narrow; costal straight; first subcostal close to end; discocellular inwardly-oblique, two radials at equal distances apart; a slender veinlet emitted within the cell from upper radial; middle median at one-fifth, lower about two-fifths; submedian and internal vein straight. Body rather stout; abdomen extending half beyond the hindwings; proboscis long, slender; palpi ascending, reaching to vertex, slender, squamous, third joint linear, acute, as long as the second; antennæ minutely serrated; legs squamous, rather stout; middle tibiæ with a pair of stout spurs, hind legs in male aborted, slender, femora fringed with silky hairs, spurs obsolete; hind legs in female stout, tibiæ with two pairs of spurs.

Type, A. niveigutta.

ATTEVA IMPARIGUTTELLA (Plate 209, Fig. 2).

Octa impariguttella, Zeller, Horæ Ent. Soc. Ross. xiii. p. 224, pl. 3. f. 77 (1877).

Forewing cupreous-red, with four outwardly-oblique series of large pure white spots; some small spots also disposed along the costa: hindwing and abdomen golden-yellow. Thorax cupreous-red; white spotted; vertex, front of head, and base of palpi white; palpi and antennæ brownish; legs yellow.

Expanse 1 inch.

Ceylon. "Colombo" (*Mackwood*).

Genus PRAYS.

Prays, Hübner, Verz. p. 413 (1825-7); Stainton, Ins. Brit. Tineina, p. 64 (1854).

PRAYS (?) PLAGIFERELLA.

Prays (?) *plagiferella*, Walker, Catal. Lep. Het. B.M. xxviii. p. 540 (1863).

"Male. Testaceous-whitish; stout. Forewings hardly acute; with some minute black speckles, a few of which form two or three small dots near the base; two fawn-coloured patches, one forming an oblique incomplete band, the other extending along the exterior border; two cinereous discal spots, one on each side of the first patch; first spot elongated, oblique, second nearly round. Head pubescent; palpi a little longer than the breadth of the head, second joint broadly fringed beneath, third lanceolate, shorter than the second, with a black subapical band; antennæ stout, minutely setulose, shorter than the forewings, abdomen extending fully half beyond hindwings.

Expanse 7 lines."

Ceylon.

Genus AZINIS.

Azinis, Walker, Catal. Lep. Het. B. M. xxviii. p. 541 (1863).

"Male. Body stout, smooth; proboscis short; palpi smooth, curved, obliquely

ascending, rising a little higher than the vertex, third joint lanceolate, almost as long as the second; antennæ bare; abdomen extending a little beyond the hindwings, apical tuft subquadrate; legs stout, smooth; hind tibiæ with a short thick fringe, spurs very long. Wings robust, elongate: forewings slightly rounded at the tips; costa and exterior border very slightly convex, the latter very slightly oblique. Neuration as in *Psecadia*."

AZINIS HILARELLA (Plate 209, Fig. 3).

Azinis hilarella, Walker, Catal. Lep. Het. B. M. xxviii. p. 542 (1863).

"Male. Pale slate-colour. Head with a black dot on the hind border; palpi white, with four black bands; thorax with four black dots; abdomen pale cinereous, luteous at the base. Forewings with eighteen black whitish-bordered dots, and with a row of small submarginal black dots; five of the eighteen are smaller than the others, and are near the submarginal row: hindwings luteous, black at the tips; fringe cinereous towards the tips.

Expanse 14 lines."

Ceylon.

Genus THEOXENIA, Walsingham.

Male. Head with appressed coarse scales above; antennæ ciliated, reaching to two-thirds of forewings; labial palpi recurved, reaching nearly to the base of the antennæ; second joint stout, apical joint half as long as the second, not acutely pointed; maxillary palpi none; haustellum long, wide, coarsely scaled at the base; ocelli none. Forewings elongate, with the costa slightly arched, rounded at the apex; with 12 veins; 7 and 8 from a common stem, 7 terminating in apex, 8 in costal margin. Hindwings broad, with a conspicuous brush of hair-like scales near the base on the upperside; the whole middle portion of the wing on the underside being tufted with long scales, forming a thick mat; neuration:—8 veins; 3 and 4 from a point arising from lower angle of cell; 5 and 6 from a point; 6 and 7 parallel. [Owing to the thickly matted scales, it is impossible to trace the whole system of the venation without denuding the wings of the scales.]

THEOXENIA PENICILLATA, Walsingham (Plate 209, Fig. 4, ♂).

Male. Palpi pale grey, touched with brownish about the apex, and with two wide brownish bands around the second joint; head slaty-grey, with a black spot above at the back; antennæ slaty-grey, pubescent, with two black spots on the upperside of the basal joint, also two beneath; thorax slaty-grey, with four conspicuous round black spots above, the posterior pair being somewhat closer to each other than the anterior pair; a small black spot at the base of each of the patagia.

Forewings slaty-grey, with numerous (28) black spots, each set in an ill-defined greyish-white ring; a small black spot at the extreme base of the wing is followed by two adjacent ones, the upper, which is slightly nearer the base than the lower of the two, lies immediately below the costal edge, and is somewhat smaller than that which is beneath it, touching the upper edge of the fold; at about one-fifth the length of the wing is another black subcostal spot, and this is followed by a large discal spot, above and a little before the middle of the wing; close to the upper edge of the cell, and nearly at the outer one-fourth of the wing is another spot followed by four similar ones, interjacent between the apical veins, with two larger ones below them near the apical margin of the cell, the outer being somewhat lower than the inner; about the anal angle of the cell is another spot preceded by four (not already mentioned), two at the lower edge of the fold, and two smaller ones placed obliquely inwards, nearer to the dorsal margin; around the apex and apical margin is a row of ten squarish spots. The fringes slightly tipped with brownish. Hindwings purplish-brown, with the costal margin pale grey ornamented with an elongate brush of curved bright ochreous scales; the abdominal margin somewhat dilated is bright ochreous; fringes unicolorous with the wings. Abdomen rich ochreous, with a round black spot on the middle of the anterior edge of each of the first five segments. Underside: Forewings pale brown, a small brown pencil of hairs at the extreme base of the costa: hindwings brown, the abdominal margin broadly ochreous, thickly matted along the middle. Abdomen with a double row of round black spots. Legs: the two anterior pair of legs banded pale grey and dark brown, the posteror pair being bright ochreous above, the tarsal joints with brown bands.

Expanse of wings 37 mms.

Ceylon.

This has greatly the appearance of *Azinis hilarella;* the pattern of the spots on the forewings being similar; the absence of the strong tufts of hair-like scales on the fore and hindwings distinguish it generically, and the brown over-spreading the whole middle portion of the upperside of the hindwings forms the conspicuous difference in colour.

Family GELECHIIDÆ.

"Forewings oblong or elongated; hindwings rather broad, generally indented. Head smooth; labial palpi recurved, generally long, sometimes with the second joint prolonged as a tuft; maxillary palpi undeveloped.

Larva with 16 legs, of very various habits, either feeding in leaves and stems of plants, beneath a flat web on underside of leaves of trees, in rolled or screwed-up

leaves of plants, between united twigs, in seeds and flowers of low plants, between the terminal leaves of plants, mining leaves, or on lichen and moss."—(*Stainton.*)

Genus DEPRESSARIA.

Depressaria, Haworth, Lep. Brit. p. 505 (1812); Curtis, Brit. Ent. fol. 221 (1828); Stephens, Illust. Haust. iv., p. 197 (1834); Zeller, Isis (1839), p. 195.

DEPRESSARIA ANGUSTA, Walsingham (PLATE 209, FIG. 5).

Head pale ochreous, roughly clothed above with a few fuscous scales intermixed, the face very pale ochreous; palpi pale ochreous, touched with fuscous towards the end of the apical joint, which is slightly thickened with coarse scales about its middle; antennæ dull cinereous; thorax pale ochreous, mixed with umbre scales. Forewings very narrow, pale ochreous, with several groups of raised dark umbre scales, one at the base, two before the middle, of which one is above and the other beneath the fold, two beyond the middle about the end of the discal cell and immediately adjacent to each other; above these is a deep fuscous shade on the costa, followed by a still more conspicuous one at the apex; around the apical margin, reaching within the anal angle, is a series of six or seven dark fuscous, elongate dots; around the raised patches of scales and about the costa above the first pair, is some ferruginous shading; a considerable portion of the ground colour of the wing being thickly clouded with umbre brown; fringes the same as the ground colour. Hindwings pale cinereous. Abdomen scarcely darker.

Expanse of wings $14\frac{1}{2}$ mms.

Ceylon.

Genus GELECHIA.

Gelechia, Zeller, Isis (1839), p. 197. Stainton, Ins. Brit. Tineina, p. 101 (1854).

GELECHIA SIGNIFERA.

Gelechia signifera, Felder et Rogen. Novara Voy. Lep. v. pl. 139 f. 23 (1875).

Female. Pale ochreous. Forewing with a black interrupted longitudinal medial streak, above which are two black cell spots, one before the other, the inner spot minute: hindwing paler. Middle of the thorax black.

Expanse $\frac{8}{10}$ inch.

Ceylon.

GELECHIA OBLIGATELLA.

Gelechia obligatella, Walker, Catal. Lep. Het. B. M. xxx p. 1023 (1864).

"Female. Brownish-cinereous. Forewings rather narrow, rounded at the tips; with two very large cupreous-brown spots; first spot interior, nearly triangular, resting on the interior border, not extending to the costa, second spot exterior,

triangular, one of its angles discal, another costal, and the third on the interior border; a minute brown apical streak. Palpi pale cinereous, smooth, slender, more than twice longer than the breadth of the head, third joint as long as second.

Expanse 5 lines."

Ceylon.

GELECHIA ALTERNELLA.

Gelechia alternella, Walker, Catal. Lep. Het. B. M. xxx. p. 1023 (1864).

"Female. Ferruginous-brown. Forewings acute, moderately broad; transversely and minutely blackish-speckled; costa with six or seven distinct oblique black points, of which the last is a little beyond the middle; some minute black points along the apical part of the costa and along the exterior border, which is straight and rather oblique: hindwings æneous-brown. Head in front and underside silvery-cinereous; palpi more than twice longer than the breadth of the head, second joint with a thick securiform fringe, third joint setiform, very slender, longer than second; antennæ much shorter than the forewings; legs stout; hind tibiæ with squamous hairs.

Expanse 12 lines."

Ceylon.

GELECHIA ANIMOSELLA.

Gelechia animosella, Walker, Catal. Lep. Het. B. M. xxx. p. 1022 (1864).

"Male. Silvery white; slender. Wings narrow: forewings gilded ochraceous towards the tips, with a black apical point. Palpi smooth, slender, full thrice longer than the breadth of the head, third joint setiform, very little shorter than the second; antennæ slender; hind legs long.

Expanse 4 lines."

Ceylon.

GELECHIA ANGUSTELLA.

Gelechia angustella, Walker, Catal. Lep. Het. B. M. xxix. p. 637 (1864).

"Female. Whitish, smooth, shining. Forewings narrow, acute; with some æneous streaks, two of which are larger than the others; of these one extends obliquely outward from the exterior costa, and the other is along the apical part of the costa; exterior border extremely oblique. Head brownish beneath; palpi smooth, slender, a little longer than the breadth of the head; third joint lanceolate, shorter than second; antennæ slender, much shorter than the forewings; abdomen attenuated.

Expanse 5 lines."

Ceylon.

GELECHIA ALBATELLA.

Gelechia albatella, Walker, Catal. Lep. Het. B. M. xxix. p. 636 (1864).

"Whitish, shining; slender. Wings rather narrow: forewings slightly acute;

speckled with fawn-colour; exterior border extremely oblique. Palpi smooth, slender, more than twice longer than the breadth of the head, third joint setiform, hardly half the length of second; antennæ smooth, slender, very much shorter than the forewings; legs smooth, slender, rather short.

Expanse 6 lines."

Ceylon.

GELECHIA EUCERELLA.

Gelechia eucerella, Walker, Catal. Lep. Het. B. M. xxix. p. 636 (1864).

"Male. Cupreous fawn-colour; silvery cinereous beneath. Wings long, narrow; fringe moderately long: forewings acute; with a cinereous costal streak a little before three-fourths of the length: exterior border extremely oblique: hindwings dark cinereous. Palpi smooth, more than twice longer than the breadth of the head, third joint very slender, as long as second; antennæ long, stout, setose, shorter than forewings; legs smooth, rather long and slender.

Expanse 10 lines."

Ceylon.

GELECHIA APTATELLA.

Gelechia aptatella, Walker, Catal. Lep. Het. B. M. xxix. p. 636 (1864).

"Male. Fawn-colour; silvery cinereous beneath. Wings rather narrow; fringe moderately long: forewings slightly rounded at the tips; exterior border extremely oblique: hindwings cinereous. Palpi broad, much longer than the breadth of the head, second joint squamous beneath, third lanceolate, a little more than half the length of second; antennæ smooth, rather stout, much shorter than the forewings; legs rather stout; hind tibiæ slightly fringed; tibiæ and tarsi with blackish bands.

Expanse 8 to 9 lines."

Ceylon.

GELECHIA PATULELLA.

Gelechia patulella, Walker, Catal. Lep. Het. B. M. xxix. p. 635 (1864).

"Male. Hoary; very stout. Wings rather narrow, slightly acute: forewings minutely and indistinctly brownish-speckled; with a few slight irregular cinereous streaks, a blackish point near the base, a blackish streak in the disc, and two blackish points near interior angle; exterior border extremely oblique. Palpi stout, much longer than the breadth of the head, second joint fringed beneath, third setiform, with three blackish bands, as long as second; antennæ smooth, rather stout, much shorter than forewings; legs smooth, short, stout.

Expanse 7 lines."

Ceylon.

GELECHIA ARCTELLA.

Gelechia Arctella, Walker, Catal. Lep. Het. B.M. xxix. p. 635 (1864).

"Male. Pale cinereous fawn-colour; slender. Wings long, narrow; fringe

very long: forewings acute; tapering from the interior angle to the tips; exterior border extremely oblique: hindwings cinereous. Palpi smooth, nearly twice longer than the breadth of the head, third joint setiform, shorter than second; antennæ stout; legs smooth, rather short and slender.

Expanse 5 lines."

Ceylon.

GELECHIA IMMERITELLA.

Gelechia immeritella, Walker, Catal. Lep. Het. B. M. xxix. p. 634 (1864).

"Æneous fawn-colour. Wings rather narrow: forewings slightly acute; with five whitish oblique elongated costal points; first point before the middle, second beyond the middle, third, fourth and fifth approximate, near the tip; exterior border slightly convex, rather oblique: hindwings paler. Head in front silvery cinereous; palpi of the usual structure, more than twice longer than the breadth of the head; third joint almost as long as second; legs smooth, slender.

Expanse 5 lines."

Ceylon.

GELECHIA ALIENELLA.

Gelechia alienella, Walker, Catal. Lep. Het. B. M. xxix. p. 634 (1864).

"Male. Pale cinereous fawn-colour. Wings moderately broad; fringe long: forewings slightly acute, speckled with brown along the costa and along the exterior border; two blackish points in the disc, one before the middle, the other beyond the middle; exterior border very oblique: hindwings cinereous. Palpi longer than twice the breadth of the head, third joint setiform, rather stout, much shorter than second; antennæ stout, much shorter than the forewings; legs smooth, rather long and stout.

Expanse 5½ lines."

Ceylon.

GELECHIA AMICELLA.

Gelechia amicella, Walker, Catal. Lep. Het. B. M. xxix. p. 634 (1864).

"Male. Cinereous fawn-colour; slender. Wings narrow: forewings acute; with a large black cinereous-bordered spot on the interior border before the middle, and a short transverse streak of the same hue in the disc at two-thirds of the length; a blackish exterior band, which extends diffusedly to the streak on the inner side, and is bordered by a slightly undulating cinereous line on the outer side; exterior border very oblique. Palpi more than twice longer than the breadth of the head, third joint very slender, longer than second; less smooth, rather short and slender; tarsi with æneous bands.

Expanse 7 lines."

Ceylon.

GELECHIA AGNATELLA.

Gelechia agnatella, Walker, Catal. Lep. Het. B. M. xxix. p. 633 (1864).

"Female. Cinereous-brown; cinereous beneath. Wings moderately broad. Forewings hardly acute, with many oblique parallel darker lines; marginal space speckled, without lines; exterior border convex, slightly oblique: hindwings cinereous. Palpi twice longer than the breadth of the head, third joint slender, a little shorter than the second; antennæ slender, much shorter than the forewings; legs smooth, slender.

Expanse 10 lines."

Ceylon.

GELECHIA TETRASPILELLA.

Gelechia tetraspilella, Walker, Catal. Lep. Het. B. M. xxix. p. 633 (1864).

"Male. Very pale fawn-colour. Wings moderately broad: forewings slightly rounded at the tips; with two blackish points in the disc, first point before the middle, a little nearer the costa than the second, which is beyond the middle: hindwings a little paler than the forewings. Palpi more than twice longer than the breadth of the head, second joint very long, slightly tufted above at the tip, third joint slender, setiform, not more than half the length of second; antennæ smooth, much longer than the forewings; legs smooth, rather short and stout.

Expanse 8 lines."

Ceylon.

GELECHIA CORNUTELLA.

Gelechia cornutella, Walker, Catal. Lep. Het. B. M. xxix. p. 632 (1864).

"Male. Slender. Cinereous fawn-colour, paler beneath. Wings long, narrow, shining: forewings somewhat rounded at the tips; exterior border extremely oblique: hindwings whitish-cinereous. Palpi more than twice longer than the breadth of the head, third joint slender, as long as the second; antennæ smooth, rather thick, shorter than the forewings; legs rather long.

Expanse 8 lines."

Ceylon.

GELECHIA STRENUELLA.

Gelechia strenuella, Walker, Catal. Lep. Het. B. M. xxix. p. 632 (1864).

"Female. Robust. Fawn-colour, cinereous beneath. Wings moderately broad; fringe rather long: forewings slightly acute; with four black points at the disc, two before the middle, and the other two beyond the middle, the third and fourth behind the first and second; some black points along the apical part of the costa and along the exterior border, which is straight and moderately oblique: hindwings cinereous. Palpi fully twice longer than the breadth of the head, second joint

rather broad, third setiform, a little shorter than the second; antennæ slender, much shorter than the forewings; legs smooth, rather short and slender.

Expanse 7 lines."

Ceylon.

GELECHIA AFFIXELLA.

Gelechia affixella, Walker, Catal. Lep. Het. B. M. xxix. p. 632 (1864).

"Female. Fawn-colour, paler beneath. Wings long, moderately broad; forewings acute, exterior border straight, hardly oblique: hindwings hardly paler than the forewings. Palpi full twice longer than the breadth of the head, third joint very slender, as long as the second; antennæ slender, much shorter than the forewings; legs smooth, long, slender, spurs very long.

Expanse 12 lines."

Ceylon.

GELECHIA DEDUCTELLA.

Gelechia deductella, Walker, Catal. Lep. Het. B. M. xxix. p. 631 (1864).

"Female. Brown. Forewings without markings, rounded at the tips; exterior border almost straight, slightly oblique. Palpi, antennæ, pectus, abdomen, legs cinereous; hindwings cinereous; palpi slightly curved, full twice longer than the breadth of the head, third joint a little longer than the second; antennæ shorter than the forewings; abdomen extending rather beyond the hindwings.

Expanse 7 lines."

Ceylon.

GELECHIA NEGATELLA.

Gelechia negatella, Walker, Catal. Lep. Het. B. M. xxix. p. 631 (1864).

"Male. Cinereous. Forewings rounded at the tips, exterior half dark cinereous; a black patch at the base; a larger black patch before the middle, abbreviated and indented towards the interior border; two exterior black discal dots placed transversely, and a more exterior deeply bent black line, which is bordered with pale cinereous on the outer side; four small elongated black marks on the exterior border: hindwings pale cinereous. Palpi bent, more than twice longer than the breadth of the head, second joint black on the outer side, except at the tip, third lanceolate, as long as the second and much more slender; antennæ long, stout; abdomen extending rather beyond the hindwings; hind legs long, stout, their tibiæ slightly fringed.

Expanse 9 lines."

Ceylon.

GELECHIA SEPOSITELLA.

Gelechia sepositella, Walker, Catal. Lep. Het. B. M. xxix. p. 630 (1864).

"Male. Cinereous. Wings long, rather narrow; fringe long. Forewings acute, black speckled; with four black dots; first near the base, second and third in the disc

before the middle, third nearer the costa than second, and further from the base, fourth in the exterior disc; a row of black points extending along the apical part of the costa and along the fore part of the exterior border, which is extremely oblique: hindwings pale æneous-cinereous. Head and fore part of thorax pale yellow; palpi pale yellow, partly black, much longer than the breadth of the head, second joint squamous, third setiform, as long as the second; antennæ minutely serrated, much shorter than the forewings; hind tibiæ fringed; anterior tibiæ and tarsi æneous-brown; tibiæ with a pale band and pale tips; joints of the tarsi with pale tips.

Expanse 12 lines."

Ceylon.

Genus ERETMOCERA.

Eretmocera, Zeller, Hand. Korg. Svensk. Vetens. Akad., 1852, p. 98.

ERETMOCERA IMPACTELLA (Plate 209, Fig. 10).

Gelechia impactella, Walker, Catal. Lep. Het. B. M. xxix. p. 637 (1864).

"Male. Dark cupreous; slender; whitish beneath. Palpi slender, much longer than the breadth of the head; third joint setiform, a little shorter than the second; antennæ smooth, rather stout; abdomen luteous, dark cupreous towards the base and the tip. Wings narrow, acute; fringe long. Forewings with a whitish streak along the base of the interior border, and with three whitish elongated spots; the first spot in the disk below the middle, second on the interior border beyond the middle, third costal, nearer the tip; exterior border very oblique.

Expanse 9 lines."

Ceylon. The type was received from North India. It is also recorded from Dharmsala, Punjab.

Genus ONEBALA.

Onebala, Walker, Catal. Lep. Het. B. M. xxix. p. 792 (1864).

"Male. Wings long, acute, rather narrow; costa very slightly convex for half the length from the base; exterior border slightly oblique, indistinctly excavated. Hindwings with the exterior border slightly excavated towards the tip; fringe very long towards the interior angle. Body smooth, rather slender; head subquadrate above; proboscis rather long; palpi smooth, very long, reflexed high above the head, second joint curved, much compressed, third setiform, slightly curved, longer than second; antennæ smooth, slender, as long as the forewings; abdomen extending rather beyond the hindwings, apical tuft small; legs smooth, slender, hind tibiæ long, stout, pubescent, spurs very long. Allied to *Gelechia*."

ONEBALA BLANDIELLA.

Onebala blandiella, Walker, Catal. Lep. Het. B. M. xxix. p. 792 (1864).

"Male. Fawn-colour, with a slight cinereous tinge. Wings with a marginal

brown line; fringe cinereous, interlined with brownish: forewings with slight metallic-green reflections; a large oblong dark brown cinereous-bordered spot in the disc before the middle; a very large exterior triangular dark brown cinereous-bordered spot, which has its base on the costa and extends to the interior angle: hindwings slightly gilded. Abdomen gilded.

Expanse 8 lines."

Ceylon.

Genus GAPHARA.

Gaphara, Walker, Catal. Lep. Het. B. M. xxix. p. 794 (1864).

"Male. Wings stout, rather narrow. Forewings rounded at the tips; costa and exterior border hardly convex, the latter very oblique; veins much like those of *Depressaria* in structure. Body moderately stout; front broad; proboscis obsolete; palpi stout, erect, not pilose, rising as high as the vertex, second joint slightly curved, third lanceolate, a little shorter and much more slender than the second; antennæ robust, smooth; abdomen extending much beyond the hindwings, apical tuft small; legs smooth; hind legs long and stout, spurs very long. Allied to *Gelechia*."

GAPHARA RECITATELLA.

Gaphara recitatella, Walker, Catal. Lep. Het. B. M. xxix. p. 794 (1864).

"Male. Cinereous-brown, hardly paler beneath. Wings with a cinereous marginal line: forewings with three indistinct blackish bands, each composed of three spots, second band more distinct than the others towards the costa; a blackish costal spot between the first band and the base. Head in front and palpi pale cinereous.

Expanse 6 lines."

Ceylon.

Genus FICULEA.

Ficulea, Walker, Catal. Lep. Het. B. M. xxix. p. 794 (1864).

"Male. Wings narrow; fringe long. Forewings rounded at the tips; costa straight, exterior border slightly convex, extremely oblique; veins much like those of *Gelechia*. Body slender; proboscis very short; palpi smooth, ascending, slightly curved, more than twice longer than the breadth of the head, second joint much compressed, third setiform, as long as the second; antennæ very minutely serrated and pubescent; abdomen extending much beyond the hindwings, apical tuft rather small; legs smooth, slender; hind tibiæ long, fringed, rather stout, spurs long. Allied to *Gelechia*."

FICULEA BLANDULELLA.

Ficulea blandulella, Walker, Catal. Lep. Het. B. M. xxix. p. 795 (1864).

"Male. Luteous. Forewings with two dark cupreous-brown slightly silvery-bordered bands; first band very much dilated hindward, second marginal, dentate on

its inner side, nearly connected with the second on the interior border. Head and palpi whitish; abdomen brown above and at the tip; legs cinereous; anterior tibiæ and tarsi brown; hind tibiæ and tarsi with brown bands.

Expanse 6 lines."

Ceylon.

Genus ANARSIA.

Anarsia, Zeller, Isis (1839), p. 190; Stainton, Ins. Brit. Lep. Tineina, p. 143 (1854).

ANARSIA (?) MONETELLA.

Anarsia (?) monetella, Felder et Rogen. Novara Voy. Lep. v. pl. 139, fig. 19 (1875).

Pale brownish-ochreous. Forewing with a nearly medial transverse slender black slightly excurved line, two slender short duplex longitudinal discal divergent streaks, and five similar longer exterior streaks: hindwing paler towards the base.

Expanse $\frac{7}{10}$ inch.

Ceylon.

Genus FRISILIA.

Frisilia, Walker, Catal. Lep. Het. B. M. xxix. p. 795 (1864).

"Male. Forewings acute, rather broad; exterior border slightly oblique, hardly concave. Body rather slender; head with two porrect tufts; proboscis of moderate length; palpi curved, ascending, about four times longer than the breadth of the head, second joint broadly fringed, third setiform, hardly shorter than the second; antennæ stout, squamous-serrated, much longer than the forewings; abdomen extending beyond the hindwings; legs slender."

FRISILIA NESCIATELLA.

Frisilia nesciatella, Walker, Catal. Lep. Het. B. M. xxix. p. 796 (1864).

"Male. Testaceous. Wings with a slight brown line along the exterior border: forewings minutely speckled with brown; two black discal points, one before the middle, the other beyond the middle. Abdomen, legs, and underside cinereous.

Expanse 6 lines."

Ceylon.

Genus TIPHA.

Tipha, Walker, Catal. Lep. Het. B. M. xxix. p. 798 (1864).

"Male. Wings elongate, moderately broad: forewing rounded at the tips; costa very slightly convex for half the length from the base; exterior margin convex, moderately oblique. Body smooth, rather robust; proboscis moderately long; palpi smooth, slender, ascending, about twice longer than breadth of the head; second joint much curved, third lanceolate, slightly curved, half length of the second; antennæ smooth, a little longer than forewings, slightly and gradually incrassated at one-fourth

its length; legs smooth, rather stout; tibiæ with a short squamous fringe; spurs very long; hind femora thinly clothed with long hairs."

TIPHA IRRORELLA, Walsingham (Plate 209, Fig. 9, ♂).

Head, palpi, and antennæ pale ochreous. Thorax and forewings creamy-white, profusely sprinkled with purple scales; the base of the costal margin and the outer third of the wing are more thickly covered than the remainder of the wing, so that the ground colour is partially obliterated; a narrow orange-ochreous border runs around the apex and apical margin at the base of the purplish-grey fringes. Hindwings grey, with pale ochreous fringes tipped with shining grey. Posterior tibiæ tufted with whitish-grey, and deep purplish-brown scales; abdomen greyish-ochreous.

Expanse $17\frac{1}{2}$ mms.

Ceylon.

TIPHA TINCTELLA, Walsingham (Plate 209, Fig. 11).

Head smooth, ochreous; palpi tinged with purplish-brown externally, long, recurved, slender, the second joint with closely appressed scales, third joint as long as the second, very slender and acute; antennæ simple, pale ochreous, with elongate basal joint, not tufted; thorax pale ochreous, purplish-brown at the sides. Forewings bright ochreous, the costal margin broadly smeared with purplish-brown to within one-third of the apex; a small patch of raised scales of the same colour on the dorsal margin near the base; the dorsal margin is shaded beyond the middle with purplish-brown, but this does not reach beyond the anal angle; fringes bright ochreous at the base, outwardly purplish-grey, the two colours being separated by a slender dark brown line. Hindwings brownish-grey, with pale ochreous fringes, tipped with shining grey. Posterior legs pale ochreous, sprinkled with purple metallic scales, conspicuous ochreous tufts above the first pair of spurs, mingled with a few bright purple scales.

Expanse of wings 21 mms.

Ceylon.

Genus DECUARIA.

Decuaria, Walker, Catal. Lep. Het. B. M. xxix. p. 797 (1864).

"Male. Wings long: forewings narrow, rounded at the tips; costa straight, exterior border slightly convex, very oblique; veins with the usual structure. Body rather stout; proboscis moderately long; palpi smooth, slender, very long, much compressed, rising high above the head, third joint setiform, as long as the second; antennæ longer than the forewings, joints elongate, cyathiform; abdomen extending much beyond the hindwings; legs smooth, hind legs especially long; spurs very long. Allied to *Gelechia*."

DECUARIA MENDICELLA.

Decuaria mendicella, Walker, Catal. Lep. Het. B. M. xxix. p. 797 (1864).

"Male. Purplish-brown. Forewings with several gilded longitudinal streaks: hindwings gilded-cinereous. Palpi and pectus whitish. Abdomen whitish along the hind borders of the segments and beneath; legs cinereous, tibiæ and fore femora with purplish-brown bands.

Expanse 9 lines."

Ceylon.

Genus GÆSA.

Gæsa, Walker, Catal. Lep. Het. B. M. xxix. p. 803 (1864).

"Male. Wings stout, moderately broad: forewings hardly acute; costa straight, exterior border hardly convex, moderately oblique; veins much like those of *Depressaria* in structure. Body stout; proboscis distinct; palpi very long, second joint stout, fringed, porrect, longer than the breadth of the head, with a lanceolate apical tuft, which projects much beyond the insertion of the third joint; third joint setaceous, curved, a little longer than second, ascending high above the vertex; antennæ smooth, very slender, minutely nodose, shorter than the forewings; abdomen extending more than half beyond hindwings, apical tuft elongate, slightly compressed; legs smooth, moderately long and stout; spurs very long. Allied to *Sophronia*."

GÆSA DECUSELLA.

Gæsa decusella, Walker, Catal. Lep. Het. B. M. xxix. p. 804 (1864).

"Male. Cinereous-brown; fringe cinereous, except at the base. Forewings with a very slight purplish-tinge, speckled with dark brown: hindwings with a slight æneous tinge.

Expanse 8 lines."

Ceylon.

Genus STROBISIA, Clemens.

STROBISIA AURANTIACA, Walsingham (Plate 209, Fig. 6).

Head dark grey; palpi cinereous, the apical joint very long and slender, acutely pointed; antennæ cinereous, spotted above with fuscous. Forewings bright orange-red; a slender metallic streak, varying according to light from steel-blue to bright green, extends from the base along the costa rather more than one-third the length of the wing, whence it diverges obliquely downwards and terminates on the discal cell; its costal angle is followed by a short black oblique costal streak, and this again is followed after a rather wider interval by a bright steel-blue spot, beneath which is a still larger spot of the same colour reaching nearly to the dorsal margin, both edged with black scales; beneath the first costal metallic streak is a similar streak also from the base, running along the fold to its middle, and below this again, near the dorsal margin, are a few similar steel-blue metallic scales; beyond the outer spots the whole

apical portion of the wing is deep brown, illuminated by one subcostal and three sub-apical metallic blue spots; fringes shining iridescent steel-grey. Hindwings and fringes brown. Legs brown, with pale spots at the tarsal joints.

Expanse of wings 10 mms.

Ceylon.

This species appears to agree with the N. American genus *Strobisia*. The only difference noticeable being that the Cingalese form has the apical margin of the forewings slightly indented below the apex instead of being almost convex.

Genus CRYPTOLECHIA.

Cryptolechia, Zeller (Handlingar Kong. Svensk. Vetens. Akad., 1852, p. 106).

CRYPTOLECHIA SPILOTELLA.

Cryptolechia spilotella, Walker, Catal. Lep. Het. B. M. xxix. p. 746 (1864).

"Male. Brown. Wings broad, with a yellowish marginal line: forewings slightly rounded at the tips; with two deep black patches in the disc; first patch near the base, larger than the second, which is transverse and beyond the middle; exterior border straight, hardly oblique: hindwings brownish-cinereous. Second joint of the palpi squamous; antennæ setulose; abdomen extending rather beyond the hindwings, hind borders of the segments cinereous, apical tuft quadrate; legs squamous, rather long and stout.

Expanse 12 lines."

Ceylon.

CRYPTOLECHIA INTERMEDIA.

Cryptolechia intermedia, Felder et Rogen. Novara Voy. Lep. v. pl. 139, fig. 13 (1875) ♂.

Forewing red, the veins along the costa with silvery tips: hindwing paler, with the base dusky. Thorax red, abdomen paler.

Expanse 1 inch.

Ceylon.

CRYPTOLECHIA DILUTICORNIS Walsingham (PLATE 209, FIG. 7).

Head brownish-grey, with a lilac tinge, subochreous at the sides; palpi pale ochreous, tinged with brownish-grey externally on the second joint; antennæ very pale ochreous. Thorax and forewings brownish-grey with a lilac tinge. Forewings of the same colour throughout, with the exception of a few ochreous scales at the extreme base below the costa, and three deep brown spots, the one adjacent to the pale patch at the base, the second slightly above the middle of the wing about one-third from the base, the third at the end of the discal cell, the latter being the most conspicuous of the three. Hindwings and fringes pale cinereous. Abdomen cinereous; legs pale cinereous with an ochreous tinge.

Expanse of wings 18 mms.

Ceylon.

This and the following species would be properly included in the Cryptolechiadæ of Meyrick, but their neuration does not agree with that of the typical Cryptolechia of Zeller. Veins 6 and 7 of the hindwings are joined at the base, not separate or parallel; veins 2 and 3 of the forewings are from a common stem, as are also 7 and 8. Many species having similar venation were subsequently included in the revision of the genus.

CRYPTOLECHIA TRIPUSTULATA, Walsingham (Plate 209, Fig. 8).

Head dull brown; antennæ setaceous, pale cinereous; palpi dull brown. Forewings dull brown, tinged in places with faint ochreous; a small deep brown spot near the base, above the middle of the wing a large and conspicuous dark brown, almost black patch beyond and below it, reaches to the dorsal margin, and is followed by a smaller patch of the same colour, occupying the end of the cell; these are all narrowly and irregularly margined with faint ochreous. On the outer fourth of the costal margin is a pale ochreous patch, with a faint trace of a similar marking opposite to it on the dorsal margin; fringes grey, pale ochreous along their base. Hindwings and fringes pale cinereous. Abdomen the same, with ferruginous bands across the upper side of each segment.

Expanse of wings 17 mms.

Ceylon.

Genus DAVENDRA.

Forewing elongate, rectangular at the tips; costa very slightly arched, apex obtuse, exterior margin erect; cilia short; cell three-fifths the length; first subcostal at half before end of the cell, second at one-sixth, third and fourth from end of cell, fourth bifid; discocellular outwardly-oblique, slender, radials near upper and lower end; two upper medians from end of cell, lower at one-seventh before the end; submedian with a lower branch at one-fourth from the base: hindwing moderately short and narrow, apex convex, cell fully half the length; two subcostals at half beyond the cell; discocellular slender, bent below the middle, radial from the angle; middle median near end of cell, lower at about one-fifth. Body moderately stout, extending one-third beyond the hindwings, laxly clothed with broad scales; eyes large; palpi long, narrow, curved upward, tips approximated, second joint reaching above the vertex, widened at the tip on the inner side, squamous, third joint slender, pointed, about one-third the length of second; antennæ biciliated to the tip in male; legs robust, middle and hind tibiæ hirsute, spurs long and slender.

Type, D. Mackwoodii.

DAVENDRA MACKWOODII (Plate 211, Fig. 13, ♀).

Forewing ochreous-yellow; with an interrupted basal, and a very broad irregular-shaped medial pale violet-brown band, beyond which is a contiguous incurved sub-

marginal series of almost confluent longitudinal streaks followed by a marginal series; the medial band wavy on its inner edge and broadly bilobed across the disc on its outer edge, its area being marked with a yellow streak at end of the cell and an outer series of spots curving from the costa: hindwing pale violet-brown; cilia edged with ochreous. Thorax, head, palpi, and legs above ochreous-yellow; tip of femora and band on fore tibia violet-brown; abdomen, and band on thorax also violet-brown.

Expanse, ♂ $\frac{6}{10}$, ♀ $\frac{7}{10}$ inch.

Ceylon. From Mr. F. M. Mackwood's Collection.

Genus GERONTHA.

Gerontha, Walker, Catal. Lep. Het. B. M. xxix. p. 782 (1864).

"Female. Wings long and narrow. Forewings rounded at the tips; exterior border convex, very oblique; discal areolet long; three inferior veins, the second forked. Body rather slender; head broad, prominent, pilose in front; eyes very prominent; proboscis very short; palpi as long as the breadth of the head, second joint thickly hirsute, third squamous, lanceolate, nearly erect, about half the length of second, with which it forms an angle; antennæ smooth, rather stout, somewhat shorter than the forewings; abdomen extending very far beyond the hindwings; legs long, rather stout; middle tibiæ pilose; hind tibiæ slightly pilose, with four long spurs."

GERONTHA CAPTIOSELLA.

Gerontha captiosella, Walker, Catal. Lep. Het. B. M. xxix. p. 782 (1864).

"Female. Brownish-cinereous. Forewings speckled with brown; a small blackish mark at end of the discal areolet; marginal points black. Second joint of the palpi beset with stout black hairs; hind tibiæ clothed with black hairs.

"Expanse 14 lines."

Ceylon.

Genus TIMYRA.

Timyra, Walker, Catal. Lep. Het. B. M. xxix. p. 782 (1864), ♂.
Uipsa, Walker, Catal. Lep. Het. B. M. xxix. p. 828 (1864), ♀.

Male and female. Wings elongate, moderately broad: forewings rounded at the tips, exterior border slightly convex, moderately oblique; veins much like those of *Depressaria*. Body rather stout; proboscis moderately long; palpi curved, ascending high above the vertex, pubescent, thinly clothed with long hairs in the male, squamous in the female, twice longer than the breadth of the head, third joint lanceolate in male, subulate in female, shorter than second; antennæ submoniliform, basal joint with a broad tuft of hairs in front; abdomen extending beyond the hindwings; legs broad, tibiæ and tip of hind tarsi densely fringed in male, less so in female. Spurs long.

TIMYRA PHYCISELLA.

Timyra phycisella, Walker, Catal. Lep. Het. B. M. xxix. p. 783 (1864), ♂.
Uipsa Perionella, Walker, Catal. Lep. Het. B. M. xxix. p. 828 (1864), ♀.

Male and female. Cinereous-yellowish. Forewings with three cupreous bands; first band basal, second and third very broad, second contracted towards the costa, irregularly connected with the third, which is submarginal; marginal line dark cupreous; fringe cupreous, cinereous at the base. Head and palpi cupreous; antennæ testaceous; tibiæ mostly cupreous, fringed with cupreous hairs; hind tarsi cupreous, with cupreous hairs towards the tips.

Expanse 1 inch.

Ceylon.

TIMYRA CINGALENSIS, Walsingham (Plate 209, Fig. 12).

Head with erect mixed subochreous and purplish scales above the eyes; face smooth; antennæ ochreous, with conspicuous tufts on the basal joint beneath, these are greyish with a slight purplish tinge; palpi very long, much recurved, the apical joint acutely pointed, the second joint somewhat flattened with long hair-like scales above and beneath. Forewings pale straw-white, with a small tuft of raised purplish scales below the costal margin near the base, above and connected with which an attenuated purplish shade extends from the base nearly to the middle of the wing; immediately beyond the middle is a purplish straight band, or fascia, divided into two parts by a slender yellow line from costal to dorsal margin; from this fascia a yellow line extends around the costal and apical margin to the anal angle, followed by a deep brown line of equal width, at the base of the purplish-grey fringes; within the apical margin a space above the anal angle is much sprinkled with purplish-grey scales. Hindwings ochreous, shaded with purplish-grey along the outer margin and near the abdominal angle; fringes pale ochreous. Hind tibiæ with large tufts of mixed iridescent purplish and ochreous scales, erect above the first pair of spurs; the tarsal joints and spurs ochreous smeared with purple.

Expanse of wings 27 mms.

Ceylon.

Genus TIPASA.

Tipasa, Walker, Catal. Lep. Het. B. M. xxix. p. 804 (1864).

"Male. Wings rather narrow; fringe long: forewings acute; costa and exterior border nearly straight, the latter moderately oblique. Body hardly stout; proboscis moderately long; palpi long, second joint porrect, densely fringed, much longer than the breadth of the head, third joint vertical, smooth, setiform, slightly curved, nearly as long as second; antennæ stout, as long as the forewings, joints subcyathiform, with acute fore angles; abdomen extending much beyond the hind-

wings, apical tuft very small; legs stout, smooth; hind tibiæ slightly fringed; spurs very long. Allied to *Harpella*."

TIPASA BASALIELLA.

Tipasa basaliella, Walker, Catal. Lep. Het. B. M. xxix. p. 805 (1864).

"Male. Fawn-colour. Forewings minutely speckled with black: hindwings, cinereous. Head, thorax, and base of the forewings blackish-chalybeous; abdomen cinereous.

"Expanse 10 lines."

Ceylon.

Genus GASMARA.

Gasmara, Walker, Catal. Lep. Het. B. M. xxx. p. 1039 (1864).

"Female. Forewings rounded at the tips; exterior border excavated. Body slender; palpi curved, four times longer than the breadth of the head; third joint longer than the second; antennæ a little shorter than the forewings; abdomen extending somewhat beyond the hindwings. Allied to *Æcophora*."

GASMARA CÆLATELLA.

Gasmara cælatella, Walker, Catal. Lep. Het. B. M. xxx. p. 1040 (1864).

"Female. Cinereous. Wings with a whitish marginal line. Forewings purplish, with two transverse whitish costal streaks, and with a whitish discal ringlet; two whitish dots, the interior one near the interior border, the exterior one contiguous to the interior border.

"Expanse 8 lines."

Ceylon.

Genus GARGELA.

Gargela, Walker, Catal. Lep. Het. B. M. xxix. p. 815 (1864).

"Male. Wings moderately broad. Forewings rectangular at the tips; exterior border nearly straight, hardly oblique. Body smooth, rather slender; proboscis distinct; palpi smooth, slender, obliquely ascending, not longer than the breadth of the head; third joint lanceolate, much shorter than second; antennæ hardly pubescent; legs smooth, short, slender; spurs long. Allied to *Æcophora*."

GARGELA SUBPURELLA.

Gargela subpurella, Walker, Catal. Lep. Het. B. M. xxix. p. 815 (1864).

"Male. Pure white, shining. Forewings with two outward-curved pale-brownish transverse lines; first line beyond the middle, more curved than the

second ; a row of gilded streaks between the second line and the exterior border ; a black point near the interior angle ; a dark brown line on the forepart of the exterior border.

"Expanse 6 lines."

Ceylon.

Family GLYPHIPTERYGIDÆ.

"Forewings oblong or elongate : hindwings ovate or lanceolate. Head generally smooth ; maxillary palpi very short, rarely perceptible.

"Flight diurnal ; delighting to fly in the hot sunshine.

"Larva with 16 legs, or apodal."—(*Stainton.*)

Genus GLYPHIPTERYX.

Glyphipterix, Hübner, Verz. p. 421 (1825-7).
Glyphipteryx, Stainton, Ins. Brit. Tineina, p. 173 (1854).

GLYPHIPTERYX SCITULELLA.

Glyphypteryx scitulella, Walker, Catal. Lep. Het. B. M. xxx. p. 839 (1864).

"Female. Bright ochraceous; stout; metallic-green beneath. Forewings deep black, varied with blue and purple for full one-third the length from the tips; a subcostal metallic-green streak extending nearly to a transverse line of the same hue, which is black-bordered on the outer side, and is nearly parallel to another transverse line, the latter bordering the black part: hindwings purplish. Palpi short, decumbent; antennæ æneous, rather thick ; abdomen æneous, short, tapering legs rather slender ; spurs moderately long.

"Expanse 8 lines."

Ceylon.

GLYPHIPTERYX APPARITELLA.

Glyphypteryx apparitella, Walker, Catal. Lep. Het. B. M. xxx. p. 839 (1864).

"Æneous. Slender. Wings very narrow; fringe long. Forewings with a broad gilded band beyond the middle. Antennæ very slender, a little shorter than the forewings ; legs slender ; spurs long.

"Expanse 6 lines."

Ceylon.

Family GRACILARIIDÆ.

"Forewings elongate ; hindwings lanceolate, cilia long. Head smooth or rough ;

antennæ as long as the forewings; labial palpi slender, terminal joint acuminate; maxillary palpi rather long, filiform. In repose, the species of this family sit on the base of the abdomen, having the head raised from the surface, the anterior pair of legs being put forward, the middle pair rather stretched outward sideways, and the posterior pair placed close beside the abdomen.

"Larva with 14 legs; mining or rolling up leaves."—(*Stainton.*)

Genus GRACILARIA.

Gracillaria, Haworth, Lep. Brit. p. 527 (1829); Curtis, Brit. Ent. fol. 479 (1833); Steph., Illust. Haust. iv. p. 362 (1835); Duponchel, Catal. p. 371 (1844).

Gracilaria, Zeller, Isis, 1839, p. 208; *id.* Linn. Ent. ii. p. 312 (1847).

GRACILARIA COFFEIFOLIELLA.

Gracilaria Coffeifoliella, Nietner, Observations on the Enemies of the Coffee-tree in Ceylon, p. 24 (1861).

"Blackish above. Wings with a few silvery spots. Greyish beneath.

"Expanse 2 lines."

Ceylon.—(*Nietner.*)

"The larva mines the leaves of the coffee-tree, and the ugly white lines and blotches so frequently—and at all seasons—seen upon the leaves are its work. The larva is 2¼ lines long, yellow, flat, naked, undulated at the sides, tapering towards either extremity; eye and footless; head brown, pointed at the extremity; and one half retractile; it is furnished near the extremity with two antennal appendages, each with three hairs at the tip; the jaws are large and quite free at the extremity of the head, moving between two large reniform lips, which gives the head a curious appearance; the penultimate segment is the smallest and is furnished with two spurs pointed outwards. Pupa 1¼ lines long, blackish in the middle, and yellow at the extremities; the head finishes in one and the tail in two spines; antennæ and feet are free at the extremity. It rests for a short time under the epidermis in a sort of cradle."—(*Nietner.*)

Family ELACHISTIDÆ.

"Forewings oblong or elongate: hindwings lanceolate or linear-lanceolate. Head generally smooth; labial palpi slender, filiform, mostly recurved and pointed. In repose, most of the genera sit closely appressed to the surface on which they rest. Flies mostly at dusk, but sometimes in little swarms in the afternoon.

"Larva with 16 legs; mostly mining in leaves."—(*Stainton.*)

Genus OPOGONA.

Opogona, Zeller, Bull. Soc. Imp. Nat. Mosc. 1853, p. 504.

OPOGONA FUMICEPS.

Opogona fumiceps, Felder et Rogenh. Novara Voy. Lep. v. pl. 139, fig. 8 (1875).

Pale yellow. Forewings with the outer half, except a triangular costal spot, fuliginous-brown. Cilia of both wings fuliginous-brown. Head blackish.

Expanse $\frac{5}{10}$ inch.

Ceylon.—(*Nietner.*)

Family LYONETIDÆ.

"Forewings narrow, often caudulate; hindwings lanceolate. Head generally smooth; labial palpi short, drooping, sometimes absent; antennæ longer than half the forewing, the basal joint expanded into an eye-cap.

"Larva with 16 legs; mostly mining leaves."—(*Stainton.*)

Genus CACHURA.

Cachura, Walker, Catal. Lep. Het. B. M. xxx. p. 918 (1864).

"Male and female. Wings narrow; fringe rather long. Forewings slightly acute; costa straight; exterior border extremely oblique. Body stout, flat, smooth, squamous; head broad; proboscis short; palpi smooth, decumbent, hardly longer than half the breadth of the head, third joint elongate-conical, shorter than the second; antennæ smooth, rather stout, very much shorter than the forewings; first joint thick; legs short, stout, smooth; coxæ especially dilated; spurs long; joints of the hind tarsi with small apical tufts of bristles."

CACHURA OBJECTELLA.

Cachura objectella, Walker, Catal. Lep. Het. B. M. xxx. p. 918 (1864).

"Male and female. Purplish-cinereous. Forewings with a broad straight upright gilded yellow band before the middle. Body beneath gilded-cinereous and shining.

"Expanse 5 lines."

Ceylon.

Family PTEROPHORIDÆ.

"Forewings slightly or deeply cleft; hindwings split almost in their entire length into three distinct feathers.

"Larva with 16 legs, rather hairy. They form no cocoon, but fasten themselves by the tail to a leaf or stem, shedding the skin and appearing in the pupa state. Some of the pupæ are nearly as hairy as the larvæ, others are quite naked. Feeds on low plants."—(*Stainton.*)

Genus AMBLYPTILIA.

Amblyptilia, Hübner, Verz. p. 430 (1825-7).

AMBLYPTILIA ARGYRIODACTYLA (Plate 209, Fig. 13).

Platyptilus argyriodactylus, Walker, Catal. Lep. Het. B. M. xxx. p. 929 (1864).

"Male. Dark ferruginous, with a cupreous tinge. Palpi smooth, third joint long, linear; abdomen with small black tufts along each side, and with three dorsal triangular spots; legs silvery-cinereous; tarsi and anterior tibiæ with silvery rings; hind tibiæ with a tuft of black hairs at the base of each pair of spurs, which are very long. Forewings with minute transverse cinereous streaks, with three blackish spots, and with a blackish marginal band; first spot on the interior border at one-fourth of the length, second on the costa before the middle, third on the costa beyond two-thirds of the length; submarginal line whitish, oblique; two black squamous tufts on the interior border; fringe whitish, with sub-quadrate black dots. Fore plume of the hindwings widening from the base to the tip; middle plume narrower towards the tip; hind plume very narrow, with a black squamous tuft on the hind border near the tip.

"Expanse 12 lines."

Ceylon.

AMBLYPTILIA TAPROBANES.

Amblyptilia taprobanes, Felder et Rogenh. Novara Voy. Lep. v. pl. 140, f. 54 (1875).

Lilacine-brown. Forewings with three black apical spots, triangularly disposed, two being on the costa, the other on the lower plume midway between them, the costal interspace being yellow; the fringe black spotted: hindwing with the fringe at end of the plumes blackish.

Expanse $\frac{7}{10}$ inch.

Ceylon.

Described from the figure quoted above. It may probably be the same as the preceding species.

Genus LEIOPTILUS.

Leioptilus, Wallengren, Vet. Akad. Handl. iii. (F.) p. 21 (1860).

LEIOPTILUS SERINDIBANUS (Plate 209, Fig. 14).

Brownish ochreous-white; the end of the plumes more brown: forewing with

a few scattered darker brown scales below middle of the cell, and a cluster at, and above base of the cleft; some brown costal points near the apex of upper plume and a point on its lower edge also near the apex; lower plume with an apical point. Plumes of hindwing with minute brown scattered scales. Fore femora and tibia brown; basil joint of antennæ tipt with brown on its inner side.

Expanse $\frac{8}{12}$ inch.

Ceylon.

Allied to *L. Lienigianus.*

Genus OXYPTILUS.

Oxyptilus, Zeller, Isis, 1841, p. 765.

OXYPTILUS ANISODACTYLUS.

Oxyptilus anisodactylus, Walker, Catal. Lep. Het. B. M. xxx. p. 934 (1864).

"Male and female. Dull pale ochraceous. Forewings with two indistinct darker bands, a whitish subcostal dot at one-third of the length, and a larger and more distinct whitish costal dot at two-thirds the length; a whitish oblique submarginal line. Hind plume of the hindwings fringed with black for one-fourth of the length near the tip. Hind tibiæ blackish about the base of the spurs.

"Expanse 10 lines."

Ceylon.

Genus PTEROPHORUS.

Pterophorus, Geoffroy, Hist. Ins. p. 90 (1762); Fabr. Syst. Ent. p. 671 (1775); Retzius, De Geer's, Ins. pp. 8 and 35 (1783); Fourcroy, Lep. Paris, ii. p. 256 (1785); Latreille, Hist. Nat. xiv. p. 257 (1805); Curtis, Brit. Ent. fol. 161 (1827); Stephens, Ill. Haust. iv. p. 370 (1835); Zeller. Isis, 1841, p. 764.

PTEROPHORUS LEUCADACTYLUS (PLATE 209, FIG. 15).

Aciptilus leucadactylus, Walker, Catal. Lep. Het. B. M. xxx. p. 949 (1864).

Silvery-white. Forewings with two small dark-brown dots near the costal margin of the first lobe; the first dot at about one-third from the apex, the second half-way between this and the apex itself; immediately beyond the latter is a third minute dot at the base of the fringes in the hinder margin of the lobe; a corresponding dot lying on the hinder margin of the second lobe.

Expanse 1 inch.

Distinguishable from *P. pentadactylus* by the forewings being narrower at the base.

PTEROPHORUS OXYDACTYLUS (PLATE 209, FIG. 16).

Pterophorus oxydactylus, Walker, Catal. Lep. Het. B. M. xxx. p. 944 (1864).

"Male and female. Pale ochraceous-fawn colour. Forewings narrow, very

acute; with a blackish costal point at a little before the middle; costa sometimes slightly and interruptedly brownish-tinged: hindwings cinereous. Hind tibiæ with a black ring at the base of each pair of spurs.

"Expanse 10 to 12 lines."

Ceylon.

December 24th, 1886.

APPENDIX.

The Author cannot refrain from the opportunity of here expressing his grateful thanks to Mr. F. M. Mackwood, of Colombo, for the very many specimens which he has so kindly forwarded to him during the progress of the present work. The remaining portion of these are described in the following appendix.

Our thanks are also due to Mr. E. Ernest Green for specimens, drawings, and notes. The collection of the late Dr. Thwaites having been brought to England for disposal, many interesting species have been added therefrom.

Sub-Family SATYRINÆ.

LETHE NEELGHERRIENSIS.

Lethe neelgherriensis (Lep. of Ceylon, i. p. 16).

The larva of this species is figured on Plate 210, fig. 4, from drawing made by Mr. E. Ernest Green.

LETHE DRYPETES.

Lethe Drypetes (Lep. of Ceylon, i. p. 17).

The larva of this species is figured on Plate 210, fig. 5, from drawing made by Mr. E. Ernest Green.

Sub-Family NYMPHALINÆ.

Genus EUTHALIA (Lep. of Ceylon, i. p.31).

EUTHALIA PUSEDA.

Adolias Puseda, Moore, Catal. Lep. Mus. E.I.C. i. p. 191 (1857); Trans. Ent. Soc. 2nd ser. v. p. 71, pl. 6, f. 5 (1859), ♀; Felder, Wien. Ent. Monat. iii. p. 400.

Euthalia Puseda, Distant, Rhop. Malayana, p. 125, pl. 18, f. 8, ♀.

Male. Upperside very dark violet-brown. Forewing with a narrow outer marginal cobalt-blue band: hindwing with a broad marginal cobalt-blue band; marginal line black; cilia white, cell marks black.

Female. Upperside pale violaceous-brown. Forewing with black cell-lines and marks below the cell; a transverse discal broad band of irregular-shaped purplish hyaline-white spots, each spot acutely concave on its outer margin; also a submarginal row of ill-defined whitish dentate spots: hindwing with two curved discal rows of indistinct white dentate spots bordered with parallel inner darker brown dentate marks; cell marks indistinct.

Expanse, ♂ $2\frac{1}{4}$, ♀ $2\frac{3}{4}$ inches.

Ceylon. In Coll. British Museum.

Family LYCÆNIDÆ.

NACADUBA ARDATES.

Nacaduba Ardates (Lep. of Ceylon, i. p. 90).

Mr. E. E. Green informs me, in a letter dated July 19th, 1886, that "the tailless form of *N. Ardates* differs distinctly in its habits from the tailed form, sporting about in large clouds round the Madras-thorn trees in Colombo. The specimens of *Ardates* that I catch up-country are never seen but singly or in pairs, and have a more hesitating flight. In all my specimens the sinuous white lines on the underside are very much broader and more distinct than those of *Ardates*. The female also differs in having a very much smaller area of blue on the forewing, in some specimens the colouring being confined to 3 or 4 blue scales alone. *Ardates* is on the wing, up-country, during most months of the year. I have only been in Colombo during the spring months, when I caught this tailless form, so that I am unable to speak positively of its period of flight."

Genus APHNÆUS (Lep. of Ceylon, i. p. 105).

APHNÆUS NUBILUS (Plate 210, Fig. 1, 1*a* *b*, ♂ ♀).

Nearest to *A. lazularia*. Male and female smaller. Upperside paler, the basal area and hindwing of a duller blue in the male, iron-grey in the female; anal lobes reddish-brown with ill-defined black spots. Underside of male ochreous, more red in the female; bands not prominent, reddish, narrower, similarly disposed except the short upper discal band on the forewing being composed of two well-separated portions, the marginal line composed of indistinct narrow points, and the second subbasal band on the hindwing being composed of three short separated portions, the lowest not extending to the end of the middle band.

Expanse ♂ ♀ $1\frac{1}{10}$ inch.

Ceylon. "Wattegama; May" (*Mackwood*).

Genus HYPOLYCÆNA (Felder).

HYPOLYCÆNA NILGIRICA (Plate 210, Fig. 3, 3*a b*, ♂ ♀).

Hypolycæna Nilgirica, Moore, Proc. Zool. Soc. 1883, p. 527, pl. 49, fig. 8, ♂.

Male. Upperside reddish-brown: forewing dusky olivaceous-brown along the costal border: hindwing with three subanal marginal black spots surmounted by red lunules, and a white-bordered black anal-lobe spot; cilia edged with white. Underside greyish-white: forewing with a very indistinct blackish discocellular lunule, a submarginal lunular line with the upper end composed of double lunules, and a marginal lunular line: hindwing with a more distinct black discocellular lunular mark, submarginal and marginal line; the upper end of submarginal line composed of double lunules; a black spot on the costa near the base, and a lobe and subanal black spot, the two latter slightly yellow and surmounted with dark yellow. Female, olivaceous-brown: hindwing with large black subanal and less-sized marginal spots surmounted with white; intermarginal line and cilia also white. Underside with markings as in male.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{1}{4}$ inch.

The male was taken by Mr. F. M. Mackwood, at Dolosbagee, in March; the female was obtained from the late Dr. Thwaites' Collection.

PRATAPA DEVA (Plate 210, Fig. 2, 2*a*, ♂ ♀).

Pratapa Deva, Moore (Lep. of Ceylon, i. p. 108, ♂).

Female. Upperside violaceous-brown; the lower basal area of forewing and the hindwing broadly lavender-blue; exterior marginal spots black. Underside creamy-white, with outer discal slender black broken line, submarginal fascia, and anal spots as in male.

Expanse ♀ $1\frac{1}{2}$ inch.

Ceylon. "Bamagalla" (*Mackwood*).

Sub-Family PIERINÆ.

Genus TERIAS (Lep. of Ceylon, i. p. 118).

TERIAS TEMPLETONII.

Terias Templetonii, Butler, Annals Mag. of Nat. Hist., March, 1886, p. 218.

"Male. Chrome-yellow. Forewings with black border as in *T. purreea*. Hindwings with narrow internally-sinuated black border. Underside gamboge-yellow, with well-defined black marginal dots: forewings with two black dots, followed by a sinuous mark within the cell; a transverse black-edged spot closing the cell: hindwings with three black ring-spots near the base, a black-edged angular

spot at end of the cell, and a discal bisinuated series of irregular squamose indistinct brown dashes across the disc.

"Expanse 1¾ inch."

Ceylon. In Coll. British Museum.

APPIAS APERTA.

Appias Aperta, Butler, Ann. Nat. Hist. 1886, p. 188.
Appias Vacans, Moore, Lep. Ceylon, i. p. 135, pl. 52, f. 2, 2 ♂ (*nec Butler*).

This Ceylon form of *A. Vacans* has been separated as above by Mr. A. G. Butler.

Genus HUPHINA (Lep. of Ceylon, i. p. 136).

HUPHINA ZEUXIPPE.

Papilio Zeuxippe, Cramer, Pap. Exot. iv. pl. 362, fig. E. F. (1782), ♀.
Pieris Zeuxippe, Butler, Catal. Fabr. D. Lep. p. 201.
Papilio Cassida, Fabricius, Ent. Syst. Suppl. p. 427 (1798).

Male. Similar to *H. Phryne.* Upperside with less black-marked borders. Underside of forewing with the black bordering of the veins faintly defined except along the cell; the two lower submarginal spots only prominent: hindwing paler yellow, with the vein borderings and submarginal spots indistinct.

Female. Upperside with similarly less defined black markings. Underside paler yellow; markings as in male.

Expanse 1 $\frac{8}{10}$ inch.

"Wattegama; March." From Mr. F. M. Mackwood's Collection.

PRIONERIS SITA.

Prioneris Sita (Lep. of Ceylon, i. p. 141).

"Larva feeds on *Capparis.* Colour dull blue-green. Head and all the segments closely dotted with minute blue tubercles; those on head and sides black tipt; dorsal surface pubescent; a lateral fringe of soft white hair below the spiracles. Pupa bright green, sharply pointed at the head; with two strong lateral points and keeled on dorsal surface of thoracic segments; an interrupted yellow lateral line, and a short curved crimson line on each side just below thoracic segments bordering a small white irregular black-speckled spot."—(*E. E. Green*, July, 1886.)

Sub-Family PAPILIONINÆ.

LAERTIAS ROMULUS.

Laertias Romulus (Lep. of Ceylon, i. p. 150).
Papilio Pammon, var. *Ceylonicus*, Felder.

Mr. E. Ernest Green has favoured me with the following interesting notes on

this species:—"Nov. 9th, 1884. I have caught several impregnated females, but I find that they are unwilling to deposit their eggs in captivity, and have hitherto invariably died without doing so; but from one female (the form true *Romulus*, as figured by Cramer, with a large amount of dull red and no white in cells of the hindwings) captured on Sept. 23rd, I expressed a single egg, after the death of the fly. This egg hatched out on Sept. 30th, was reared upon orange-leaves, and is now, Nov. 9th, in the pupa stage. From this pupa the imago emerged on Jan. 23rd, 1885, and I now send you the specimen."

This specimen, as above reared by Mr. Green, is a male of the true *Pammon* form (as figured on Plate 59, fig. 1), with the curved white band across the hindwings. Mr. Green in a subsequent note also says: "I have seen all the different forms of the female on the wing in the same months."

MENELAIDES JOPHON (Lep. of Ceylon, i. p. 152), Plate 210, Fig. 6, larva.

Mr. E. Ernest Green has favoured me with a drawing (which is here reproduced) of the larva of this species, and the following description:—"Egg tawny, globular, ribbed, a small point at apex. Larva dark purple-black, with crimson coloured spines, two on second segment, eight on each of third and sixth, six on each of eighth to tenth, and four on thirteenth; seventh segment with pale cream-coloured transverse band (interrupted on the dorsal line), including four spines of the same colour, below which on each side is a single crimson spine; on second segment is a band composed of four pale tubercular spots, from the two central of which can be protruded a pair of short blunt yellow horns."

Family HESPERIIDÆ.

ISMENE ŒDIPODEA.

Ismene Œdipodea (Lep. of Ceylon, i. p. 158), Plate 211, Fig. 2, larva.

"Larva very similar to that of *Bibasis Sena*, the chief differences being in colour of the head, which is black and orange; a yellow stripe, continuous, above the lateral spot; the spots themselves being enclosed in a pale ring and set in a smoky lateral stripe; spots on twelfth segment orange; a single white spot upon anal flap. Feeds on Hiptage. Pupa pale salmon colour, powdered over with a thin pearly bloom; two distinct raised black spots in front of thorax, and other indistinct spots almost hidden by the bloom. No bald spot on thorax."—(*E. E. Green*, July, 1886.)

BIBASIS SENA.

Bibasis Sena (Lep. of Ceylon, i. p. 160), Plate 211, Fig. 4, larva.

"Larva pale grey; with three narrow parallel black dorsal stripes, followed

on each side by an interrupted yellow stripe, and on each segment a large round black spot, and one or two short black lines; twelfth segment with two red spots; head black and crimson. Feeds on Hiptage. Pupa very pale flesh colour, covered with a white powdery-bloom, except upon a large oval spot on the thorax, which remains clear; a few small black spots upon angles of thorax; a double dorsal row of inconspicuous spots marking the abdominal segments."—(*E. E. Green*, July, 1886.)

PLESIONEURA SPILOTHYRUS.

Plesioneura spilothyrus (Lep. of Ceylon, i. p. 179), Plate 211, Fig. 3, larva.

"Larva dull green, with two narrow pale dorsal lines; head brown, divided into two distinct lobes; middle segments swollen. Feeds on *Acanthus*. Pupa pale green; anal segment terminating in a curved blunt point; sheath of proboscis produced to terminal segment; covering of eyes pubescent."—(*E. E. Green*, July, 1886.)

Family SPHINGIDÆ.

Genus DAPHNIS (Lep. of Ceylon, ii. p. 14).

DAPHNIS ERNESTINA (Plate 211, Fig. 1, ♀).

Female. Purplish olivaceous-grey. Forewing with a black basal dot, an olive-green subbasal patch, an almost erect discal darker-bordered fascia, and a narrow upper marginal angular band; a short curved transverse pale streak before the apex, and some dark sinuous marks on the discal fascia: hindwing olive-green, with a recurved pale submarginal line and abdominal streaks. Head and thorax purplish olivaceous-grey; tegulæ olive-green; abdomen reddish, with greyish segmental bands and tip.

Expanse $2\frac{1}{2}$ inches.

Ceylon. "Punduloya; Dec." (*E. E. Green*).

Family LITHOSIIDÆ.

Genus PADENIA (Moore, Lep. of Ceylon, ii. p. 58).

PADENIA TRIFASCIATA (Plate 211, Fig. 14, ♀).

Female. Forewing creamy-white; crossed by an inwardly-oblique basal, antemedial, and postmedial narrow angulated purplish-brown fascia, followed by some submarginal dots and a marginal dotted line; two small obliquely superposed black spots at end of the cell: hindwing and abdomen pale yellow. Thorax creamy-white; head, palpi, and legs yellow; side of palpi, base of tibiæ, and tarsi with a black band.

Expanse 1 inch.

Ceylon. "Wattegama; April" (*Mackwood*).

Genus DIDUGA.

Male. Forewing elongate, narrow; costa almost straight, apex obtuse, exterior margin slightly oblique and straight; cell long, three-fourths the length; first subcostal at two-fifths before end of cell, second at one-sixth, third from end of cell, trifid; discocellular bent near the ends, radials from the angles; middle median very close to end of cell, lower at three-fifths before the end; submedian slightly recurved: hindwing rather long and narrow, apex produced; cell two-thirds the length; two subcostals at one-third beyond the cell; discocellular bent in the middle, radial from the angle; middle median at nearly one-third before end of cell, lower from near the base. Body short, moderately stout, anal tuft lax; palpi obliquely porrect, very slender, rather long; vertex flat, broad; antennæ stout, finely biciliated; legs rather long, smoothly squamous; middle tibiæ with one pair and hind tibiæ with two pairs of very slender unequal spurs.

DIDUGA COSTATA (Plate 211, Fig. 8, 9, ♂ ♀).

Violaceous-grey. *Male.* Forewing with an ochreous-yellow costal and exterior marginal band, the former undulated along its inner edge, angled at the apex and below the middle of the exterior margin; an outwardly-oblique black spot on the costal edge at one-third from the base and another at one-third before the apex, from the latter a wavy line extends to the angle; cilia yellow: hindwing and cilia paler violaceous-grey. Thorax and tegulæ in front, vertex, and base of antennæ yellow; front of head, palpi, and legs violaceous-grey.

Female. Forewing with the costal band convex and broader before the apex; costal spot absent.

Underside. *Male.* Both wings entirely violaceous-grey. *Female.* Forewing with the apex and exterior border yellow.

Expanse, ♂ $\frac{6}{8}$, ♀ $\frac{5}{8}$ inch.

Ceylon. "Dickoya" (*Green*).

Genus NAROSODES.

Wings small. Forewing moderately broad, costa arched, tips rounded, posterior margin convex at the base; cell two-thirds the length, disposed along middle of the wing; first subcostal at half before end of cell, second at one-fourth, third from end, bifid; discocellular zigzag, two radials from the angles; middle median very close to end of cell, lower at two-fifths; submedian slightly recurved: hindwing rather long, triangular; cell two-thirds the length; costal joined to subcostal to half length of the cell; two subcostals on a footstalk at half beyond the cell; discocellular slender, radial from below the middle; the middle median close to end of cell; lower submedian and internal vein straight. Body short, slender; palpi porrect, slender,

extending half beyond the head; antennæ very minutely pubescent; legs slender, middle tibia with a pair, and hind tibia with two pairs of long slender unequal spurs.

NAROSODES PUNCTANA (Plate 211, Fig. 7).

Tospitis punctana, Walker, Catal. Lep. Het. B. M. xxviii. p. 431 (1863).

Whitish-ochreous. Forewing with traces of five or more brownish-ochreous curved wavy fasciæ crossing the middle and disc; a minute black dot at end of the costal and subcostal veins; two indistinct dots also at end of the cell and one above middle of the submedian. Palpi and fore tibiæ above brown.

Expanse $\frac{6}{10}$ inch.

Ceylon. "Dickoya."

From Mr. E. E. Green's Collection.

Genus HOMOPSYCHE.

Homopsyche, Butler, Annals and Mag. Nat. Hist. 5th ser. x. p. 226 (1882).

Male. Wings small, semidiaphanous, clothed with short delicate hairy scales. Forewing elongated; costa much arched, with a lax well-developed fringe; apex obtuse, exterior margin very slightly oblique, hardly convex, posterior margin fringed; cell fully two-thirds the length, costal vein short; first subcostal at one-third before end of cell, second at one-sixth, third bifid; discocellular convex, bent at equal distances from ends, radials from the angles; middle median at one-sixth, lower at fully two-fifths; submedian straight: hindwing triangular, apex obtuse, exterior margin very oblique, slightly convex; cell fully two-thirds the length, subcostal straight, bifid at half length beyond the cell; discocellular bent outward above middle, and inward below the middle, radial from lower angle; middle median at one-sixth, lower at half; submedian and internal vein straight. Body short, slightly clothed with fine hairy scales; palpi minute; proboscis long; antennæ with the basal third thick and finely pilose, setaceous to the tip, entirely setaceous in the female; legs moderately long; tibiæ slightly pilose; middle tibiæ with a pair of short spurs, hind tibiæ with two pairs of slender spurs.

Type, H. nudarioides.

HOMOPSYCHE NYMPHA (Plate 211, Fig. 11, ♂).

Male. Cinereous-white. Wings semidiaphanous, clothed with short delicate hairy scales. Forewing crossed by an indistinct subbasal, antemedial, and a submarginal ochreous-yellow zigzag line, the latter much diffused, followed by a row of marginal spots; a rounded spot in middle of the cell more brownish-ochreous: hindwing, body, antennæ, and legs cinereous-white.

Expanse $\frac{6}{10}$ inch.
Ceylon. "Punduloya."
From Mr. E. E. Green's Collection.

Genus HEMONIA.

Hemonia, Walker, Catal. Lep. Het. B. M. xxviii. p. 425 (1863).

"Male and female. Wings rather broad: forewings much rounded at the tips; costa and exterior broader very convex, the former dilated; subcostal vein emitting six oblique well-defined veinlets to the costa; two inferior veins. Body stout, smooth; proboscis short; palpi slender, smooth, porrect, extending very little beyond the head; third joint linear, as long as the second; antennæ slightly pectinated in the male, minutely setulose in the female; thorax squamous, tegulæ short; abdomen not extending beyond hindwings; legs smooth, rather short and stout; hind tibiæ with four long spurs."

HEMONIA ORBIFERANA (Plate 211, Fig. 6, ♀).

Hemonia orbiferana, Walker, Catal. Lep. Het. B. M. xxviii. p. 426 (1863).
Pitane rotundata, Snellin, Tijd. Voor. Ent. 1879, p. 92, pl. 10, f. 6.

"Male and female. Purplish-grey: forewings with a brown diffuse zigzag interior line, which is indistinct in the female and nearly obsolete in the male; a reddish black-marked dot in the exterior disc; a black diffuse curved submarginal line; a chalybeous tinge between this line and the exterior border. Hindwings, and abdomen yellowish-white in the male, whitish-cinereous in the female."

Expanse $\frac{5}{10}$ to $\frac{6}{10}$ inch.
Ceylon.

Family ARCTIIDÆ.

Genus ATTATHA.

Attatha, Moore, Proc. Zool. Soc. 1878, p. 847.

"Forewing elongated, narrow; costa straight, apex bluntly angular, exterior margin oblique, angle convex; posterior margin convex at the base. Hindwing oval, exterior margin very convex. Venation similar to that of *Euplagia Hera*. Body elongated, abdomen extending beyond hindwings; antennæ slender, minutely setose; legs long, femora and tibiæ slightly pilose; palpi long, slender, porrect."

ATTATHA REGALIS (Plate 212, Fig. 4).

Hypercompa regalis, Moore, Proc. Zool. Soc. 1872, p. 575, pl. 33, fig. 7, ♂.
Attatha regalis, Moore, Proc. Zool. Soc. 1878, p. 848.

Forewing ochreous-white, tinged with ochreous-red at the posterior angle; with

a prominent black elongated spot at the base, a fusiform streak along middle of the posterior margin, an outwardly-oblique tapering band from middle of the costa, and another similar band from before the apex; between the two latter is a parallel slender brown line with a zigzag lower end; each band terminates before the posterior angle, where there is a black spot, three others along the exterior margin, and a black marginal line above to the apex: hindwing scarlet, with a marginal row of small black spots and a larger anal spot. Thorax and top of head ochreous-white, with a black collar or band across the middle and a triangular spot at the base; abdomen ochreous-yellow; palpi and legs red; front of head, tip of palpi, fore and middle legs above black.

Expanse 2 inches.

Ceylon. Collected by Mr. F. M. Mackwood.

Family LIPARIDÆ.

Genus DASYCHIRA (Lep. of Ceylon, ii. p. 97).

DASYCHIRA PUDICA (Plate 211, Fig. 5, ♀).

Female. White. Forewing very sparsely sprinkled with minute brown scales; crossed by an obsolescent subbasal, antemedial, and a postmedial brown-scaled sinuous line, the costal ends of which are slightly dilated; marginal sinuous line slender. Palpi above, and short bands on legs brown.

Expanse ♀ $1\frac{7}{8}$ inch.

Ceylon. "Peradeniya; April" (*Mackwood*).

Family DREPANULIDÆ.

(Lep. of Ceylon, ii. p. 118.)

Genus PROBLEPSIS.

Caloptera, * Frivaldsky, Magyar Term. Tars. Evkony.-(*Jahrb. Ungarischen Natur. Gesell.*) I. p. 185 (1845); H. Schæff. Samm. Eur. Schmett. Suppl. ii. p. 97 (1845).

Problepsis, Lederer, Verh. Zool. Bot. Vereins Wein. ii. pp. 75 et 114 (1853).

Argyris, Guénee, Phal. ii. p. 12 (1857); Walker, Catal. Lep. Het. B. M. xxiii. p. 806 (1861).

Forewing rather long, triangular; cell half the length: first subcostal at nearly half before end of cell, second at one-fourth, quadrifid, slightly touching the first near its base; sixth from end of cell; discocellular bent near upper end, radial from the angle; middle median close to end, lower at one-third: hindwing short, exterior margin very convex, slightly dentated; cell half the length; first subcostal near the

* Previously used by Guérin for a genus of Diptera.

end; discocellular slightly oblique and concave, radial from above the middle; the middle median close to end of cell, lower at two-fifths. Body robust; palpi porrect, short, clothed with coarse lax scales, apex short, obtuse; antennæ rather broadly bipectinated in male, the branches slender, finely ciliated, and each ending in a short fascicle; legs smoothly squamous; middle tibiæ with a pair of slender spurs; hind tibiæ thickened, clothed with lax spatular scales above and furnished with a long basal fascicle of fine silky hairs beneath, spurs obsolete; hind tarsi very short.

Type, P. ocellata.

PROBLEPSIS DELIARIA (Plate 202, Fig. 6, ♀).

Argyris deliaria, Walker, Catal. Lep. Het. B. M. xxiii. p. 808 (1861).

White. Wings with three very indistinct outer cinereous lunular fasciæ: forewing with a large discal obovate ochreous ringlet, which is interlined with raised silver scales and has two black-speckled streaks at its lower end; beneath it is a paler ochreous silver-lined shade extending to the posterior margin: hindwing with a less distinct smaller and narrower constricted paler ringlet, which is also silver-lined. Vertex and palpi above cinereous-black; front partly white; legs ochreous.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{5}{10}$ inch.

PROBLEPSIS EXTRUSATA (Plate 202, Fig. 7).

Ephyra extrusata, Walker, Catal. Lep. Het. B. M. xxii. p. 637 (1861), ♀.

Lilacine whitish-cinereous. Wings thinly speckled with dark brown scales; discal and submarginal line very indistinct, zigzag, brown, the latter with blackish points; marginal points black; cell spot on forewing elongated, constricted, ochreous, incompletely ringed with silvery-black raised scales: hindwing with a narrow nearly straight-ochreous silvery-lined cell spot. Front of head, palpi above, and forelegs ochreous-brown.

Expanse $1\frac{2}{10}$ inch.

Genus SOMATINA.

Somatina, Guénee, Phal. ii. p. 10 (1857); Walker, Catal. Lep. Het. B. M. xxviii. p. 805 (1861).

Forewing triangular, arched at end, apex acute, subfalcate; cell fully half the length; first subcostal at nearly half before end of cell, second at one-fourth, slightly touching first near its base, quadrifid, the fifth from near its base and slightly touching second above its juncture with first, sixth from end of cell; discocellular slightly bent above the middle, radial from the angle; middle median near end of cell, lower at one-third: hindwing broad, short, apex somewhat angular, exterior margin even, very oblique, slightly convex, anal angle produced; cell half the length, broad; first subcostal before end of cell; discocellular slightly oblique, radial from the middle; the middle median near end, lower at nearly half. Body robust, thorax

broad; palpi curved, clothed with broad coarse lax scales, apex pointed; antennæ biciliated in male, finely pubescent in female; legs smooth; middle tibiæ with a pair of long slender unequal spurs; hind tibiæ very thick, with a lengthened tuft of silky hairs on inner side, spurs not visible, hind tarsi short.

Type, S. anthophilata.

Note.—This genus, though agreeing in many characters with Problepsis, differs entirely in the shape of the wings and form of male antennæ.

SOMATINA PURPURASCENS (Plate 202, Fig. 2, 2*a* ♂ ♀).

Male. Differs from *S. anthophilata* in being larger, and of a purplish-cinereous white. Wings distinctly black speckled: forewing crossed by a medial, discal, submarginal, and a marginal cinereous-black speckled line, the three inner lines being angulated, and the outer sinuous; interspace between the two inner lines below the median, and also between the two outer lines and the margin blackish-cinereous; upper end of the inner lines slightly dilated, and the outer sinuous line black speckled below the apex; a distinct black spot at end of cell: hindwing with a distinct black cell spot, a slight cinereous-black speckled discal line, sinuous submarginal line, and white sinuous marginal line; the interspace between the two latter and the margin blackish-cinereous. Cilia blackish-cinereous. Body black speckled; abdomen above blackish-cinereous; vertex, and front of head blackish; antennæ, palpi, and forelegs above brown. Female. Purplish-cinereous, brighter externally; speckled as in male; transverse markings the same, but less distinct.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{5}{10}$ inch.

Genus PHALACRA.

Phalacra, Walker, Catal. Lep. Het. B. M. xxxv. p. 1638 (1866).
Acropteris (part), Hübner, Zuträge.

Male. Forewing elongate, rather narrow, apex acute; cell half the length; first subcostal at one-fifth, second approximate, trifid, fifth from end; discocellular outwardly recurved, radials from above the middle and lower end; the middle median at one-sixth, lower nearly half: hindwing rather long, apex convex, exterior margin produced to a prolonged angle at end of second subcostal, straight from thence to anal angle; cell nearly one-third the length; first subcostal at one-third; discocellular outwardly-concave, radial from above the middle; the middle median about one-fourth, lower at half. Body short, rather stout; palpi porrect, very short, laxly squamous beneath; antennæ thick, flat, smooth; legs rather short and thick; middle tibiæ with one pair and hind tibiæ with two pairs of slender spurs.

PHALACRA VIDHISARIA (PLATE 201, FIG. 1, ♀, 1*a* larva).

Hemerophila Vidhisaria, Walker, Catal. Lep. Het. B. M. xxi. p. 319 (1861), ♀.
Phalacra metagonaria, Walker, *id.* xxxv. p. 1639 (1866), ♂.
? *Acropteris conprimaria*, Hübner, Zuträge, v. p. 18, fig. 867 (1837).

Cinereous-brown. Forewing with two oblique superposed black points at end of the cell; a curved discal and submarginal row of pale-bordered black points, the former being linear at its lower end: hindwing with a pale-bordered brown subbasal line, a discal pale-bordered denticulated line, and a marginal row of black points; a black point at end of the cell. Abdomen with brownish bands.

Expanse 1 to 1$\frac{2}{10}$ inch.

Larva fusiform, head broad; with lateral and dorsal setæ, and prolonged anal setaceous spines; colour green, with a dorsal pink band laterally bordered with yellow and two red lines. Pupa dark purple, with a white powdery-bloom.

Genus DRAPETODES.

Drapetodes, Guénee, Phal. i. p. 424 (1857); Walker, Catal. Lep. Het. B. M. xxii. p. 653 (1861).

Forewing short, hardly triangular; costa arched at base, apex obtuse; cell half the length; first subcostal at one-third, second from end, quadrifid, the fifth being emitted from below second close to its base; discocellular bent near upper end and acutely outward in middle and again close to lower end, radials from upper and lower angles; middle median at one-third, lower at two-thirds: hindwing broad, triangular, apex convex; first subcostal at half before end of cell; discocellular bent obliquely outward above middle and close to lower end, radial from lower angle; middle median at one-third, lower at two-thirds. Body slender in male, thick in female; palpi obliquely ascending, slender, almost straight, squamous, third joint short, obtuse; antennæ thick, flattened, smooth; legs short and rather thick, squamous, middle tibiæ with one pair and hind tibiæ with two pairs of spurs, the outer being long and slender.

Type, D. mitaria.

DRAPETODES FRATERCULA (PLATE 200, FIG. 1, ♂, 1*a* larva).

Smaller than *D. mitaria.* Wings paler yellow: forewing with the curved oblique discal wavy lines more distinct and black-speckled towards their posterior end, the marginal black dentated band of metallic scales very prominent: hindwing with the lines and middle band very prominent, the band dark ochreous-brown, the discal lines well separated, and with a wider clear space between the inner line and edge of the band; marginal black line prominent.

Expanse, ♂ $\frac{9}{10}$, ♀ 1 inch.

Ceylon.

"Dickoya" (*E. E. Green*).

"Larva somewhat resembling that of the European *Cilix spinula*. With 14 legs, anal claspers absent; length 9 lines. Colour pale salmon-pink; head pale yellow, with two dark brown transverse bands; anal segment tapering to a bifid point; each segment with six small setaceous glandular spines. Dorsal surface of second, third, and fourth segments dull green, of fifth and sixth and of eleventh and twelfth dark olive-brown; ventral area of second to the sixth and from eleventh to thirteenth dark brown; lateral area of seventh to tenth yellow; a lateral series of six dark brown diagonal stripes, each stripe extending through two segments. Feeds upon Cardamomum and allied plants. Spins a loose cocoon in a rolled-up leaf, and changes to a red pupa covered with a white powdery-bloom."—(*E. Ernest Green*, Oct. 1886.)

Family LIMACODIDÆ.

(Lep. of Ceylon, ii. p. 125.)

Genus NAGODA.

Male. Wings mostly transparent. Forewing elongated, rather narrow, apex obtuse, exterior margin very oblique; cell more than half the length, first sub-costal about one-third before end of cell, second immediately before the end, third from the end, trifid; discocellular outwardly-oblique, concave; upper radial from above the middle, lower close to end; a straight veinlet emitted within the cell from below upper radial; middle median near end of cell, lower at nearly one-third before the end; lower radial curved upward; lower median curved downward; two sub-median veins, upper curved upward, lower straight and with a short lower basal branch: hindwing short, somewhat triangular, apex and anal angle obtuse; cell two-fifths the length at upper end, half at the lower end; costal vein free; two subcostals from end of cell; discocellular very deeply concave, radial from angle near lower end; middle median close to end of cell, lower at one-third; two submedians and an internal vein nearly straight. Body stout; densely clothed with long lax spatular hairs; palpi short, stout, porrect, very laxly clothed, apex minute; antennæ broadly bipectinated to more than half its length, tip serrated; legs stout, densely clothed with very long hairs, which almost cover the tarsi.

Allied to the Australian genus Anaphæa (*A. Oxleyi*).

NAGODA NIGRICANS (Plate 211, Fig. 10, ♂).

Male. Fuliginous-black. Wings mostly semi-transparent. Forewing with the basal area, posterior border, the apex, extreme costal and exterior margin, with the

cilia, black: hindwing with the costal border, abdominal margin, extreme exterior margin, and the cilia, black. Front of thorax, head, palpi, hairs on tibia above, and tarsi, ochreous; thorax behind the collar interspersed with grey hairs; hind part of thorax and abdomen with a few ochreous-tipt hairs; palpi above, and legs above, black; antennæ ochreous.

Expanse 1 inch.

Ceylon. "Punduloya."

From Mr. E. E. Green's Collection, who also kindly furnishes the following note:—"Larva onisciform-cochlipodous, smooth, semi-transparent, greenish-blue. Feeds on the leaves of the coffee-tree. Pupa enclosed in a small round, very tough, greyish-white cocoon, from which the moth (♂) emerges by cutting a lid-shaped opening at one end, and flies about immediately."

Family LASIOCAMPIDÆ.

(Lep. of Ceylon, ii. p. 137.)

Genus CHILENA.

Chilena, Walker, Catal. Lep. Het. B. M. v. p. 1070 (1855).

Male. Forewing rather short, triangular, apex rounded, exterior margin oblique; posterior angle rounded; cell narrow, fully half the length; first subcostal at half before end of cell, second at one-fourth, bifid; fourth from end of cell, fifth also from end of cell, bifid; discocellular extremely slender, inwardly-oblique; third median close to end of cell, second at one-third, first (or lower) at two-thirds: hindwing short, exterior margin very convex; cell one-fourth the length at upper end; two short precostal veins, costal vein bent; subcostal two-branched, first branch near the base and slightly touching the costal at its angle, lower subcostal straight; discocellular slender, outwardly-oblique, two upper medians on a footstalk beyond end of cell, second close to end, first (or lowest) at half before the end. Body moderately stout, woolly, abdomen extending one-third beyond hindwings; palpi small, porrect, rather short, pilose, apex very minute; antennæ broadly bipectinated to the tip, the branches stoutest at their tip; legs stout, clothed with long woolly hairs; hind tibiæ with minute apical spurs.

CHILENA SIMILIS (Plate 212, Fig. 5, ♂).

Chilena similis, Walker, Catal. Lep. Het. B. M. v. p. 1071 (1855).

Purplish-cinereous. Forewing brownish-ochreous basally, purplish-cinereous externally; crossed by an inwardly-oblique retracted antemedial dusky-brown fascia, a straight postmedial fascia, and a sinuous pale-bordered submarginal line; a pure

white oblique streak at end of the cell. Front of head, and forelegs brownish-ochreous.

Expanse ♂ $1\frac{4}{10}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus PANDALA.

Pandala (Lep. of Ceylon, ii. p. 140).

PANDALA DOLOSA (Plate 212, Fig. 3, ♀).

Pandala dolosa, Walker, Catal. Lep. Het. B. M. iv. p. 922 (1855); Moore, Lep. of Ceylon. ii. p. 140, pl. 134, f. 5, ♂.

Female. Cinereous purpurescent-brown. Both wings with the subbasal, medial, and submarginal narrow sinuous bands darker brown.

Expanse ♀ 2 inches.

Ceylon.

Taken at Kandy, in May, by Mr. F. M. Mackwood.

Genus EUPTEROTE.

Eupterote (Lep. of Ceylon. ii. p. 140).

EUPTEROTE FASCIATA (Plate 212, Fig. 1, ♂).

Male. Ochreous-yellow. Forewing crossed by a purplish-red diffused basal and subbasal curved band, ill-defined medial sinuous diffused lines, and a darker oblique almost straight narrow discal band; contiguous to the latter is a slender parallel series of small vein-points, and a larger spot between the middle and lower median veins; exterior border with a broad purple-red curved band: hindwing with a slight purple-red basal band, darker discal band, and outer series of rounded spots. Thorax purplish-ochreous.

Expanse 4 inches.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus HORANPELLA.

Horanpella (Lep. of Ceylon, ii. p. 143).

HORANPELLA CINNAMOMEA (Plate 212, Fig. 2,)♀.

Female. Dark cinnamon-brown. Forewing crossed by a broad oblique paler glaucescent fascia, the inner edge of which is evanescent: hindwing paler towards the base.

Expanse 4 inches.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus APONA.

Apona, Walker, Catal. Lep. Het. B. M. vii. p. 1762 (1856).

Wings ample, rather broad; costa of forewing convex towards the apex, which is slightly acuminate in the male and falcate in the female. Body thick; thorax clothed with dense long hairs; palpi very short, thickly clothed with lax hairs; antennæ long, very broadly plumose to the tip in male, pectinated in the female; legs stout, densely clothed with long hairs; hind tibiæ with two moderately long thick apical spurs.

Type, A. pallida.

APONA SHEVAROYENSIS (Plate 213, Fig. 1, 2, ♂ ♀).

Apona Shevaroyensis, Moore, Trans. Ent. Soc. 1884, p. 373.

Dark cinnamon-brown, darkest along the exterior border; forewing crossed by a darker brown sub-basal, medial, and a pale-centred duplex discal line; the area between the medial and discal line traversed by four sinuous lines; submarginal border with a more or less indistinct zigzag-bordered glaucescent-grey fascia bordering the discal line; a small black spot at end of the cell: hindwing with similar, but less distinct, discal lines and intermediate sinuous lines. Antennæ dark brown, shaft white; tarsi ochreous-white.

Expanse, ♂ 5, ♀ 5¾ inches.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Family HEPIALIDÆ.

(Lep. of Ceylon, ii. p. 156.)

Genus HEPIALUS.

Hepialus, Fabricius, Syst. Ent. p. 589 (1775); Cuvier, Tabl. Hist. Nat. p. 597 (1798); *id.* Hist. Nat. xiv. p. 174 (1805); Leach, Edin. Enc. ix. p. 131 (1815); Stephens, Ill. Haust. ii. p. 4 (1828); Guénee, Walker.

Hepiolus, Ochsenheimer, Treitschke.

HEPIALUS TAPROBANUS (Plate 212, Fig. 6).

Forewing greyish purplish-brown; base densely covered with darker brown scales; the outer area crossed by darker brown broken zigzag bands, followed by

a marginal row of spots; a white triangular spot in middle of the cell, and a small black spot at the posterior angle: hindwing purplish-brown; costal border, and the cilia tinged with ochreous. Body, palpi, and legs purplish-brown; base of abdomen clothed with long ochreous hairs.

Expanse $1\frac{6}{10}$ inch.

Ceylon.

Taken at Wattegama, in March, by Mr. F. M. Mackwood.

Family CYMATOPHORIDÆ.

Genus RISOBA (Lep. of Ceylon, iii. p. 1).

RISOBA BASALIS (Plate 214, Fig. 1).

Risoba basalis, Moore, Desc. Lep. Coll. Atkinson, p. 91 (1882).

Male and female. Forewing pale brownish-ochreous, greyish along the costa and below the apex; a whitish basal, oblique, black-edged band, bordered outwardly by dark brown; disc crossed by an irregular inwardly-oblique black, sinuous, pale-bordered line terminating hindward in white; interior of the wing crossed by two indistinct black lines and a sinuous fascia; apical patch dark brown and black, streaked with whitish tips at costal end and below angle; a slight pale-bordered black lunular marginal line: hindwing cinereous-white, with broad brown marginal band, and a discal spot. Body cinereous-brown, white speckled; legs brown above.

Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{4}{10}$ inch.

Ceylon. (*Coll. Mackwood*).

Family APAMEIDÆ.

Genus PERIGEA (Lep. of Ceylon iii. p. 28).

PERIGEA DOLOROSA.

Mamestra dolorosa, Walker, Catal. Lep. Het. B. M. xxxii. p. 667 (1865).

Dark purple-brown. Forewing crossed by an indistinct subbasal, antemedial, discal, and a submarginal ochreous-white bordered black denticulated line, a marginal row of pale dots and cilial spots; orbicular mark pale lined, reniform mark composed of aglomerated ochreous-white spots: hindwing cinereous-white with broad brown border; a whitish-bordered darker marginal line; cilia cinereous-white. Thorax dark purplish-brown; abdomen cinereous-brown; palpi and legs blackish, speckled with ochreous; tarsi with ochreous bands.

Expanse $1\frac{4}{10}$ inch.

"Kandy; July." From Mr. F. M. Mackwood's Collection.

Family ORTHOSIIDÆ.

(Lep. of Ceylon, iii. p. 35.)

Genus ELYDNA.

Elydna, Walker, Catal. Lep. Het. B. M. xv. p. 1712 (1858).

Forewing elongate, costa nearly straight, apex obtuse, exterior margin oblique, slightly convex; posterior margin very convex at the base; cell fully half the length; first subcostal at two-fifths before end of cell, second at one-eighth, bifid; fourth from end of cell, bifid; fourth joined to third for a short distance from above the base of fifth; sixth also from end of cell; discocellular slender, outwardly-oblique, radial from near lower end; middle median close to end of cell, lower at two-fifths; submedian nearly straight: hindwing short, apex and exterior margin convex; cell half the length; two subcostals from end of cell; discocellular very slender, concave, bent below the middle, radial from the angle; two upper medians from end of cell, lower at one-third. Thorax stout, spherical; abdomen rather short; palpi curved upward, reaching to vertex, slender, almost smooth, third joint elongate, about one-third the length of second; antennæ simple: legs stout, squamous; middle tibiæ clothed with lax hairy scales; middle and hind tibiæ with very long spurs.

Type, E. transversa.

ELYDNA TRAPEZATA (Plate 214, Fig. 9).

Lilacine-ochreous. Forewing crossed by a slender brown outwardly-oblique antemedial line, an excurved medial line, and an angular discal line; a similar slender line also entending from the middle line, at end of the cell, to the exterior margin: hindwing semidiaphanous at the base. Tip of palpi, and forelegs above brown.

Expanse 1 $\frac{4}{10}$ inch.

"Wattegama; May." From Mr. F. M. Mackwood's Collection.

Family HADENIDÆ.

(Lep. of Ceylon, iii. p. 36.)

Genus APPANA.

Appana, Moore, Proc. Zool. Soc. 1881, p. 355, Desc. Lep. Coll. Atk. p. 126 (1882).

Forewing somewhat short, costa straight, apex slightly pointed, exterior margin oblique, very slightly waved and convex; first subcostal branch emitted from half

length of the cell, second at one-fourth, trifurcate, third at one-fourth and fourth at one-half from base of second, fifth from end of the cell, projecting upward and touching the third near its base; cell long; upper discocellular very short, lower bent in the middle; upper radial from angle near subcostal, lower radial and upper median from angles immediately above end of the cell, middle median from its end, lower median from one-third before its end; submedian slightly recurved: hindwing triangular, exterior margin convexly oblique and waved; two subcostal branches emitted from a short distance beyond end of the cell; discocellular obliquely concave, radial from near its lower end; two upper median branches from end of cell; submedian and internal veins long. Body moderate, abdomen extending beyond hindwing; palpi, short, stout, squamose, third joint very short; antennæ setose; legs pilose beneath.

Allied to *Habryntis*, Lederer (*H. Scita*, Hübner).

APPANA CINGALESA (Plate 214, Fig. 6, ♀).

Female. Pale cinereous purplish-brown. Forewing with a darker brown band curving broadly from middle of the cell to posterior margin and narrowly upward to the costa before the apex; the band accompanied by a slender, contiguous, parallel brown line; above the band is a dark brown triangular spot at upper end of the cell; traces of a slender brown subbasal line, and a submarginal pale-bordered line: hindwing and abdomen paler. Cilia purplish-brown. Thorax, palpi, and legs purplish-brown.

Expanse 1 $\frac{4}{10}$ inch.

Ceylon.

Family ACONTIIDÆ.

(Lep. of Ceylon, iii. p. 50.)

Genus BAGADA (Lep. of Ceylon, iii. p. 48).

BAGADA PYROCHROMA (Plate 214, Fig. 2).

Bagada pyrochroma (Lep. of Ceylon, iii. p. 48).

Forewing purplish-ferruginous, palest along the costa; blackish-cinereous along the posterior border; crossed by irregular wavy blackish-cinereous bands, a darker lower discal fascia and a contiguous slender discal line; orbicular and constricted reniform mark distinct and pale bordered: hindwing and abdomen dusky

cinereous; cilia purplish-red. Thorax purplish-red; palpi and forelegs above blackish-cinereous; middle and hind legs paler.

Expanse $1\frac{1}{10}$ inch.

Ceylon. "Kandy; July." From Mr. F. M. Mackwood's Collection.

Family PLUSIIDÆ.

Genus ABROSTOLA.

(Lep. of Ceylon, iii. p. 68.)

ABROSTOLA NUBILA (Plate 214, Fig. 5.)

Forewing dark greyish-brown; with a transverse dark purple-brown antemedial and postmedial angulated duplex-line, the intermediate area being dark glossy purple-brown, darkest below the cell; reniform mark black-edged; a very slender black sinuous submarginal line shaded with purple-brown before its anterior end: hindwing brown, palest at the base; cilia cinereous-brown. Thorax, and legs clothed with lax grey and purple-brown hairs; abdomen brown, with grey and purple-brown dorsal tufts; tarsi with pale bands.

Expanse $1\frac{1}{10}$ inch.

Ceylon. "Dickoya" (*Green*).

Family HOMOPTERIDÆ.

(Lep. of Ceylon, iii. p. 90.)

Genus FELINIA.

Felinia, Guénee, Noct. iii. p. 322 (1852); Walker, Catal. Lep. Het. B. M. xiv. p. 1514 (1858).

Forewing rather narrow, triangular, apex somewhat rounded, exterior margin very oblique, denticulated; cell narrow, half the length; first subcostal fully one-third before end of cell, second at one-sixth, trifid, very slightly touching the first above base of the third; fifth, from end of cell and slightly touching base of the third; discocellular concave, radials from upper end and close to lower end; middle median near end of cell, lower at two-fifths: hindwing broad, exterior margin convex, denticulated; cell one-third the length; two subcostals from the end; discocellular concave, slender, radial from close to lower end; two upper medians from end of cell, lower about one-fifth. Body stout; palpi ascending, curved, rather long, second joint compactly pilose, third joint about half length of second, cylindrical, subspatulate; antennæ long, whip-shape, minutely ciliated in front; legs most densely clothed

with long lax hairs, those of the hindlegs extending nearly to tip of the tarsi ; hind tarsi also hairy.

FELINIA SPISSA (Plate 214, Fig. 4 ♀).

Felinia spissa, Guénee, Noct. iii. p. 322 (1852) ; Walker, Catal. Lep. Het. B. M. xiv. p. 1514.
Briarda decens, Walker, Catal. Lep. Het. B. M. xiii. p. 1098 (1857).

Cinereous. Forewing with numerous brown-speckled transverse lunular strigæ, a broad dilated transverse dark-brown subbasal band with acutely-defined zigzag outer edge, an irregular zigzag discal line, and a triangularly-curved costal patch ; a more or less defined brown fascia also crossing the middle ; marginal points and denticulated line, brown : hindwing with a dusky-brown submarginal fascia, and denticulated marginal line. Thorax brown-speckled ; collar dark brown ; side of palpi, and basal band on forelegs blackish.

Expanse $1\frac{8}{10}$ inch.

Ceylon. (Kandy, July). From Mr. F. M. Mackwood's Collection.

Genus HOMOPTERA.

(Lep. of Ceylon, iii. p. 97.)

HOMOPTERA CATENATA (Plate 214, Fig. 1).

Pale brownish-ochreous. Forewing crossed by a slender undulated black subbasal line and a discal line, beyond which is a broad blackish dilated upper-discal band, bordered by a contiguous ochreous-brown wavy diffused line ; an ochreous-brown band before the basal line, and two diffused wavy lines crossing the middle, embracing a pale reniform mark at end of the cell ; costal ends of the lines dilated and blacker ; a narrow black chain-like border along the exterior margin : hindwing with slender black undulated discal line, diffused ochreous-brown wavy medial and submarginal line, and chain-like marginal border. Thorax with a blackish tuft at the base ; palpi at the side, and bands on forelegs black.

Expanse 1 inch.

Ceylon. From Mr. F. M. Mackwood's Collection.

Family HYPOGRAMMIDÆ.

SELEPA STRIGIFERA.

Selepa strigifera (Lep. of Ceylon, iii. p. 103).

Figure 4 on Plate 158 represents a variety of the female of this species.

Genus PLOTHEIA (Lep. of Ceylon, iii. p. 105).

Note.—It is probable that the Figures 5 to 12 on Plate 157 represent male and

female varieties only of a single species Figure 10 is a male of that named *basifascia*, and Figure 12 a female variety of that named *spurcata*.

Family CATEPHIIDÆ.

ANOPHIA OLIVESCENS.

Anophia olivescens (Lep. of Ceylon, iii. p. 117).

This species is figured on Plate 159, fig. 2.

GYRTONA HYLUSALIS.

Gyrtona hylusalis (Lep. of Ceylon, iii. p. 124).

The female of this species is represented on Plate 158, fig. 9.

Family DYSGONIIDÆ.

Genus DYSGONIA (Lep. of Ceylon, iii. p. 175).

DYSGONIA AMYGDALIS (Plate 214, Fig. 3).

Allied to *D. Maturescens*. Dark olivaceous-brown. Forewing distinctly lilacine-grey speckled from the base to the middle; the transverse blackish antemedial line and the postmedial line wider apart, the outer edge of the latter below the angle being somewhat denticulated; apical patch indentated on its outer side: hindwing with the base, exterior border and subanal fascia lilacine-grey.

Expanse $1\frac{8}{10}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Family FOCILLIDÆ.

(Lep. of Ceylon, iii. p. 195.)

EGNASIA SCOPIGERA.

Egnasia scopigera, Moore, Lep. of Ceylon, iii. p. 195, pl. 172, f. 9 ♂.

Note.—The female of this insect is figured on Plate 215, fig. 3.

Genus HINGULA (Lep. of Ceylon, iii. p. 199).

HINGULA TRANSVITTA (Plate 215, Fig. 1).

Forewing dark ferruginous-brown; crossed by a broad medial inwardly-oblique

darker brown band, which is almost black at its lower end; the inner-edge of the band straight, the outer-edge sinuous and tipt with white at the costal end; base of wing with a posterior dusky streak; an antemedial indistinct very slender excurved sinuous black line tipt with white at its costa end; a submarginal indistinct cinereous sinuous fascia, and a marginal row of black points: hindwing purplish-brown, with several short cinereous stripes from and above anal angle, and a marginal row of dots; cilia edged with brownish-cinereous. Thorax, and abdomen ferruginous-brown; head, palpi, and legs darker brown; legs speckled with cinereous; tarsi with white bands.

Expanse $1\frac{3}{10}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Family THERMESIIDÆ.

Genus MESTLETA (Lep. of Ceylon, iii. p. 207).

MESTLETA FASCIOSA (PLATE 214, FIG. 12).

Forewing cinereous, with five transverse inwardly-oblique brownish-ferruginous bands, of which the exterior is the most red; a submarginal row of black points, the lowest being indistinct; cilia brownish, edged with cinereous: hindwing ochreous; cilia cinereous-white. Thorax, head, and palpi cinereous; abdomen brownish; side of palpi, and forelegs above brownish.

Expanse $\frac{8}{10}$ inch.

Ceylon. "Punduloya" (*Green*).

NOTE.—This species has much resemblance to *Ophiuche mistacalis*, Guén. (Lep. of Ceylon, iii. p. 229, pl. 175, fig. 6.)

Genus GESONIA (Lep. of Ceylon, iii. p. 212).

GESONIA FLAVIFRONS (PLATE 214, FIG. 8).

Forewing pale purplish ochreous-brown; without markings: hindwing ochreous-brown; cilia brownish-ochreous. Head, basal joint of antennæ, tip of palpi, and tarsal bands on forelegs ochreous-yellow; base of palpi, and forelegs dark brown; middle and hindlegs ochreous-brown.

Expanse $\frac{8}{10}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus DORANAGA.

Forewing short, broad; costa almost straight, apex acute, exterior margin slightly oblique, convex, posterior margin convex; cell half the length; first subcostal at one-third before end of cell, second from the end, trifid, fifth also from the end; discocellular slender, nearly erect, radials from near each end; middle median near end of cell, lower at two-fifths; submedian slightly recurved: hindwing short, apex and exterior margin convex; cell nearly half the length; two subcostals from end of cell; discocellular concave, radial from near lower end: two upper medians from end of cell, lower at one-fourth; submedian and internal vein straight. Body rather stout; thorax robust; palpi long, slender, curved upward to above the vertex, laxly squamous at the base, third joint elongate; antennæ bipectinated, the branches very fine and ciliated; legs smooth; middle tibiæ with one pair and hind tibiæ with two pairs of long slender nearly equal spurs.

Type, D. apicalis.

DORANAGA APICALIS (Plate 214, Fig. 7).

Forewing purplish-brown; crossed by a curved wavy antemedial brown line, and a darker brown oblique straight line extending from the apex to middle of the posterior margin; a submarginal row of black-speckled points, a white spot at lower end of the cell, a black dot at its upper end, and one at its base; a prominent white triangular spot on the costa before the apex; hindwing, and abdomen cinereous ochreous-brown; cilia ochreous. Thorax, head, fore and middle legs above purplish-brown; side of palpi and bands on forelegs blackish; legs beneath cinereous-brown.

Expanse $\frac{9}{10}$ to 1 inch.

Ceylon.

From Mr. F. M. Mackwood's collection.

DORANAGA STRIATURA (Plate 214, Fig. 11).

Male. Forewing lilacine brownish-ochreous, with numerous transverse indistinct delicate brown wavy continuous striæ, and a few black scattered scales about the posterior area; crossed by a short straight basal, an excurved antemedial, and a recurved postmedial white-bordered brown line, each line terminating hindward above the posterior margin; two superposed black spots at end of the cell, the upper one minute; a submarginal series of black points, and an upper marginal row of whitish points: hindwing ochreous-white, with broad brownish outer border; cilia white. Thorax, head, palpi, and legs brownish-ochreous; forelegs above, and tarsal bands, dark brown.

Expanse $1\frac{2}{8}$ inch.

Ceylon. "N. Matale; November" (*Mackwood*).

Family HERMINIIDÆ.

(Lep. of Ceylon, iii. p. 247.)

Genus AVITTA.

Avitta, Walker, Catal. Lep. Het. B. M. xv. p. 1675 (1858).

AVITTA RUFIFRONS (PLATE 215, FIG. 2).

Forewing dark purplish-brown; with four transverse equidistant indistinct blackish narrow fasciæ: hindwing dusky-brown; cilia paler, edged with cinereous. Thorax dark sepia-brown; abdomen dusky-brown; collar, head, palpi, and forelegs above, ferruginous-red, edged with white; middle and hindlegs, and tarsal bands pale brown.

Expanse $1\frac{0}{10}$ inch.

Ceylon. "Dickoya; April" (*Mackwood*).

Family PYRALIDÆ.

(Lep. of Ceylon, iii. p. 264.)

Genus TAMRACA.

Male. Forewing elongate, costa nearly straight, apex obtuse, exterior margin oblique, slightly convex, posterior margin rounded towards the base; cell more than half the length, narrow; first subcostal about one-fifth, second close to end of cell, third from the end, trifid; discocellular slender, concave, radials from upper and lower end; middle median close to end of cell, lower at one-third: hindwing moderately broad; exterior margin convex; cell nearly half the length; subcostal free from the costal; two subcostals from extreme end; discocellular bent above the middle, lower end long, very oblique; radial from very close to lower end; middle median close to end of cell, lower at fully one-third. Body rather stout; labial palpi porrect, laxly scaled, second joint projecting half beyond the head, third joint short; maxillary palpi short, slender; antennæ bipectinated to one-third the tip, the branches short and tipt with tufted ciliæ; legs rather short, stout; tibiæ with short stout hairy scales, spurs stout.

Near to Cledeobia.

TAMRACA TORRIDALIS (PLATE 215, FIG. 7, 8, ♂ ♀).

Asopia torridalis, Lederer, Pyral. pp. 342, 457, pl. 6, f. 15 (1863).
Pyralis torridalis, Moore, Lep. Ceylon, iii. p. 264.
Varnia incerta, Walker, Catal. Lep. Het. B. M. xxxiii. p. 829 (1865).

Cupreous-red. Forewing with a transverse excurved medial, and a nearly straight denticulated postmedial yellow-bordered diffused blackish line; the inner area between the lines and also the outer border somewhat yellow; a lunular spot at end of the cell, and slender marginal spots blackish: hindwing with a

transverse medial and discal denticulated diffused blackish line, the outer borders of which, and the inner area, being yellow, with a whitish elongated spot below the end of the cell; marginal spots blackish. Cilia blackish with a pale inner line. Body, palpi, and legs paler.

Expanse ♂ $\frac{9}{10}$ inch, ♀ 1 $\frac{2}{10}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus HERCULIA.

(Lep. of Ceylon, iii. p. 261.)

HERCULIA BILINEATA (Plate 215, Fig. 11).

Dark cinereous-red. Both wings crossed by an excurved antemedial, and a straight postmedial pale ochreous line. Cilia with a pale ochreous inner line.

Expanse $\frac{5}{8}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus AGATHODES.

Agathodes, Guénee, Delt. et Pyralites, p. 207 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 377 (1859).

Stenurges, Lederer, Wien, Ent. Monats. vii. p. 416 (1863).

Forewing long, narrow, lanceolate; apex acute, exterior margin oblique; cell nearly three-fifths the length; first subcostal at fully one-third before end of cell, second from angle very close to end, trifid, fifth from the end; discocellular slightly concave, radials from close to each end; two upper medians from end of cell, lower at one-fourth: hindwing rather long, triangular, apex rounded; cell nearly half the length; two subcostals at a short distance beyond end of cell, base of first joined to the costal; discocellular outwardly-concave, radial from lower end; two upper medians from end of cell, lower at one-fourth. Body stout; abdomen long, lanceolate; labial palpi robust, short, curved upward to vertex, laterally broad and compressed, pilose, apex minute; maxillary palpi slender, pilose at tip; proboscis stout, squamous above; antennæ simple, long; legs smooth, long, spurs very long and slender.

(*A. ostentalis.*)

AGATHODES OSTENTALIS (Plate 215, Fig 10).

Perinephela ostentalis, Hübner, Geyer, Zütr. Samm. Exot. Schmett, pt. v. p. 11. Fig. 833-4 (1837).

Agathodes ostentalis, Guénee, Delt. et Pyral. p. 208 (1854); Walker, Catal. Lep. Het. B. M. xvii. p. 378 (1859).

Stenurges ostentalis, Lederer, Pyral. p. 417 (1863).

(?) *Phalæna dentalis Fabricius*, Ent. Syst. iii. 1. p. 241.

Forewing olivaceous ochreous-yellow; costal edge and a slender marginal line

whitish; with an oblique crimson band extending from middle of the posterior margin upward to middle of the exterior margin and thence to the costa before the apex; edges of the band with a narrow bordering white line; cilia crimson: hindwing æneseent olivaceous-yellow, semihyaline, with a brownish apical marginal fascia; cilia whitish. Body olivaceous ochreous-yellow, with three basal white bands; base of palpi, and legs white.

Expanse $1\frac{1}{8}$ to $1\frac{2}{8}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus COPTOBASIS (Lep. of Ceylon, iii. p. 291).

COPTOBASIS DEFICIENS (Plate 215, Fig. 12).

Cupreseent cinereous-brown. Forewing crossed by an extremely indistinct pale bordered brown curved antemedial line, and an irregular postmedial line, the latter curved inward to below end of the cell and with a yellow streak at its costal end; an indistinct pale-bordered brown lunule at end of the cell: hindwing with a very indistinct curved discal pale fascia. Cilia edged with cinereous-white. Anal tuft of male ochreous; base of palpi and pectus white.

Expanse ♂ $\frac{9}{10}$ inch.

Ceylon.

Nearest to *C. adductalis*.

COPTOBASIS COLOMBOENSIS (Plate 215, Fig. 13).

Violet-brown, glossy, iridescent. Forewing crossed by a diffused blackish excurved antemedial line, and an irregular postmedial line, which is curved inward to below end of the cell; a blackish streak at end of the cell, and a spot in the middle: hindwing with a very faint darker curved discal line, and small cell spot. Cilia with a slender pale inner line. Base of palpi, pectus, and legs cinereous-white; fore tibiæ with a brown band.

Expanse 1 inch.

Ceylon. "Colombo, December" (*Mackwood.*)

Near to *C. cuprealis*, from the Andamans.

Genus CATACLYSTA (Lep. of Ceylon, iii. p. 299).

CATACLYSTA DELICATA (Plate 215, Fig. 5, ♂).

Male. White, shining. Forewing with an ochreous-yellow band along base of the costa, two discal bands, and an upper marginal band, the three latter uniting above the posterior angle, a band also curving from near the base to near the

posterior angle ; a very slender blackish line along inner edge of the marginal band; the costal band and anterior end of the two discal bands tinged with brownish-ochreous: hindwing with a broad medial wavy ochreous band and basal spot, and four large black quadrate marginal spots with an intervening silver speck. Abdomen with an ochreous basal band.

Expanse $\frac{6}{10}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Genus Glyphodes (Lep. of Ceylon, iii. p. 320).

GLYPHODES ZELIMALIS (Plate 215, Fig. 6).

Glyphodes Zelimalis, Walker, Catal. Lep. Het. B. M. xvii. p. 502 (1859) ; xix. p. 974 (1859).

Forewing purplish ochreous-brown; with a broad hyaline opalescent-white outwardly-oblique medial band, and an inwardly-oblique discal band, the latter decreasing to a point above the posterior margin ; both bands outwardly bordered by a slender contiguous pale-bordered brown line, the outer line also bordered by a lilacine fascia ; basal area traversed by oblique pale streaks; a short pale line traversing the medial brown space ; cilia paler ochreous-brown : hindwing hyaline opalescent-white, with a lower outer marginal purplish ochreous-brown band traversed by a discal darker brown lilacine-bordered line; a short brown streak below end of the cell. Body above purplish ochreous-brown ; tegulæ, base of palpi, body and legs beneath white, legs above ochreous-white.

Expanse $1\frac{1}{10}$ inch.

Ceylon.

From Mr. F. M. Mackwood's Collection.

Family CRAMBIDÆ.

Genus CATAGELA (Lep. of Ceylon, iii. p. 385).

CATAGELA LEUCANIA, Felder et Rogenh. Nov. Voy. Lep. v. Plate 137, Fig. 13 (1875).

Ceylon.

Family ÆGERIIDÆ.

"Wings horizontal in repose, generally naked, with the tips above opaque. Antennæ fusiform, a little curved, ciliated in the male, the apex terminating in a

plume of scales; ocelli two, minute, placed between the antennæ and base of the thorax; palpi elongate, thickly clothed with scales and long hairs, third joint elongate; abdomen cylindric, tufted at the apex.

"Flight diurnal.

"Larva subcylindrical, hirsute, tailless; pale and fleshy, residing beneath the bark, pith, or internal substances of various trees. Pupa elongate, with a row of spines on each segment; changes in the interior of plants."

Genus MELITTIA.

Melittia, Hübner, Verz. bek. Schmett. p. 128 (1818-25).

Forewing narrow, long; posterior margin recurved; cell fully two-thirds the length; first subcostal emitted at one-fifth before end of the cell, second and third close to the end, approximate, fourth from end of cell, bifid at half its length beyond the cell; discocellular bent slightly outward at one-third and two-thirds its length, the middle also bent inward and emitting a short veinlet within the cell; radials from outer angles of the discocellular; middle median from angle close to end of cell, lower very close to the middle branch; submedian short, slender: hindwing rather long, exterior margin very oblique, anal angle very convex; costal vein extending along edge of the margin, short; subcostal partly confluent with the costal; cell half the length; two subcostals emitted at one-fourth beyond the cell, the base and upper branch extending close along edge of the costa; discocellular outwardly oblique, bent in the middle, radial from the angle; middle median one third before end of cell, lower at one-half; a straight submedian and two internal veins. Body stout; abdomen oblanceolate, extending three-fourths beyond hindwings; head rather broad; labial palpi ascending, second joint reaching level of the vertex, broad in front, pilose, third joint lanceolate, nearly half length of second; antennæ subclavate, curved at apex, with short fine ciliæ in front to near the end, the ciliæ arranged in tufts, the tip also with a short tuft; legs stout; fore and middle legs laxly squamous, base of middle tarsi pilose; hind legs and tarsi densely pilose, outer spurs very long.

Type, M. bombyliformis.

MELITTIA PHORCUS.

Melittia Phorcus, Westwood, Cabinet of Orient. Ent. p. 62, pl. 30 Fig. 7 (1847-8).

Purplish black: forewing with a hyaline streak extending below the cell, two similar streaks within the cell, and an oval hyaline vein-lined spot beyond the cell; the discoidal and apical area speckled with a few ochreous-red and white scales; base of posterior margin also covered with ochreous-red scales: hindwing hyaline,

traversed by black veins; base with a few ochreous-red scales. Cilia cinereous black. Collar and lower part of thorax ochreous-red; antennæ black, the tip reddish; palpi and pectus, and forelegs beneath yellow, interspersed with black hairs above; middle femora and tibiæ beneath with yellow and white hairs, tibia and tarsi above black; hind tibiæ outwardly clothed with long yellow and ochreous red hairs, the tibiæ inwardly, and tarsi clothed with long black hairs; abdomen above with slender ochreous yellow segmental bands.

Expanse $1\frac{1}{4}$ inch.

Genus ÆGERIA.

Ægeria, Fabricuis, Illiger's Mag. Ins. vi. p. 288 (1807); Samouelle, Ent. U.C. p. 245 (1819); Stephens, Ill. Haust, i. p. 138 (1828); Leach, Edin. Enc. ix. p. 131 (1830); Children, Philos. Mag. 1830, p. 123.

ÆGERIA FLAVICAUDATA (Plate 211, Fig. 12, ♂).

Wings transparent. Forewing with the costal border and a band across end of the cell purple-black; outer border and cilia greyish-black: hindwing with greyish-black cilia. Head and palpi black; thorax and abdomen dark purple-black; collar, and a band near apex of abdomen white; anal tuft ochreous, laterally edged with black; legs blackish; hind legs yellowish beneath.

Expanse $\frac{5}{8}$ inch.

Ceylon. "Punduloya; March" (*E. E. Green*).

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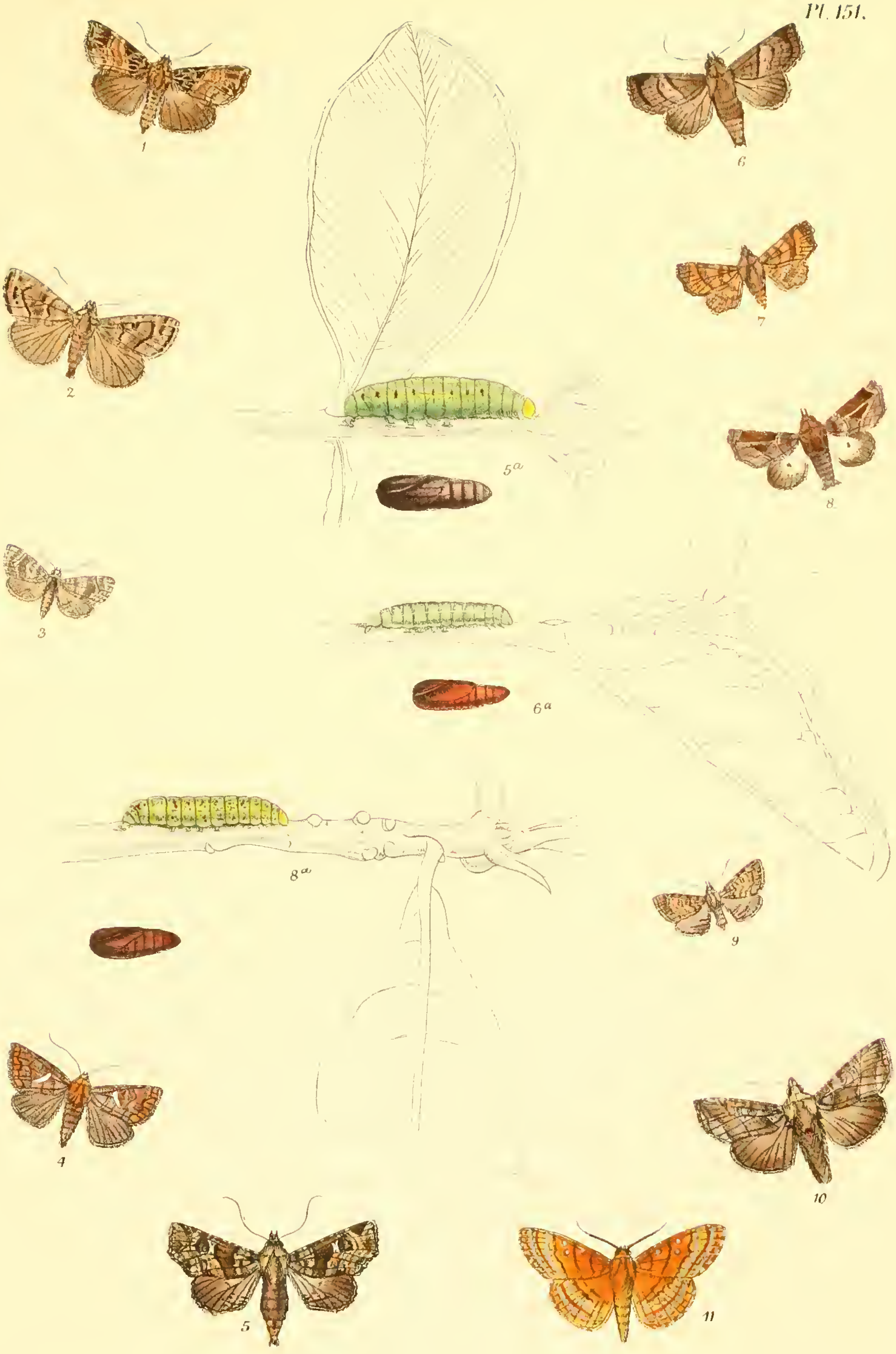

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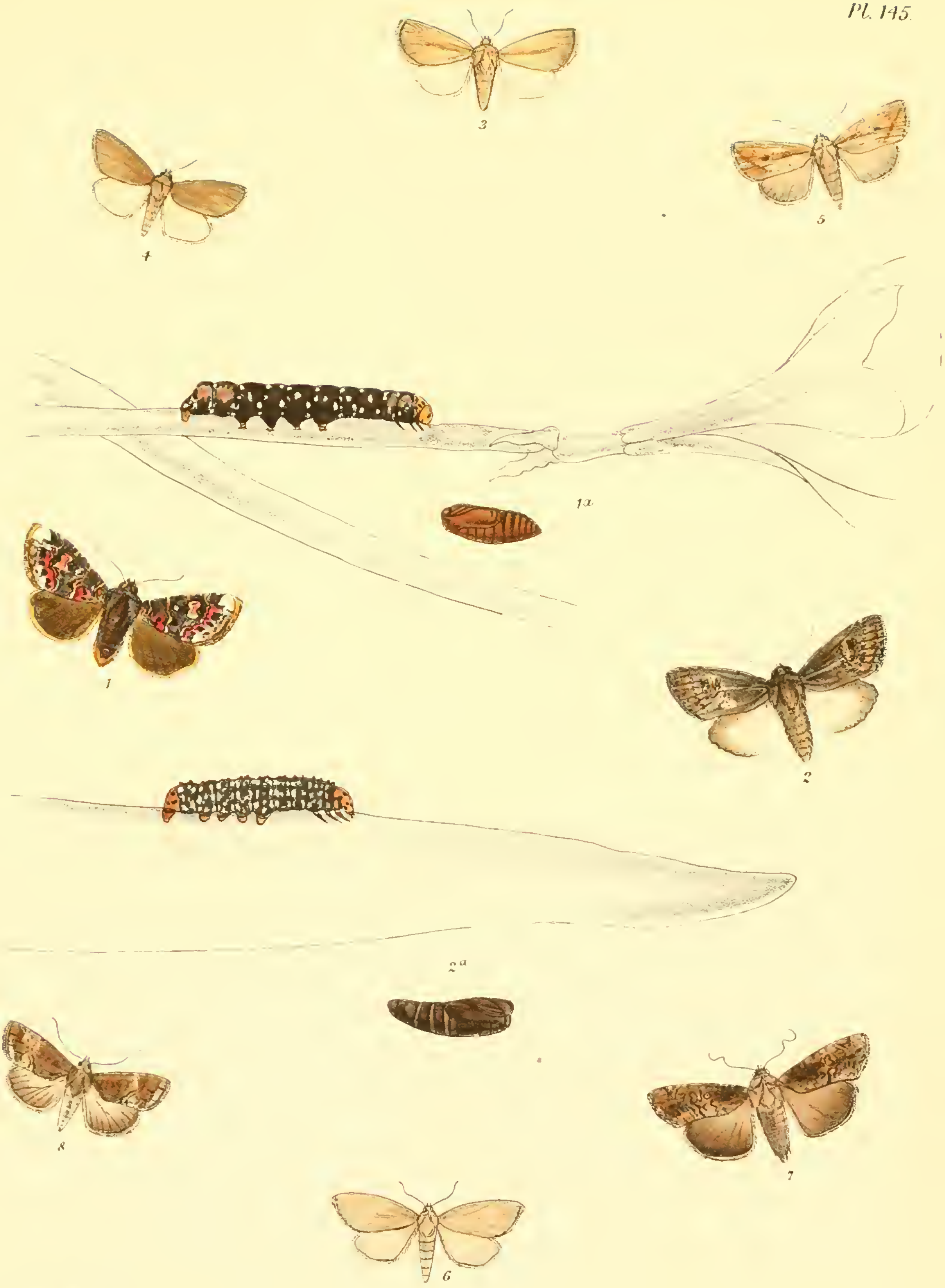

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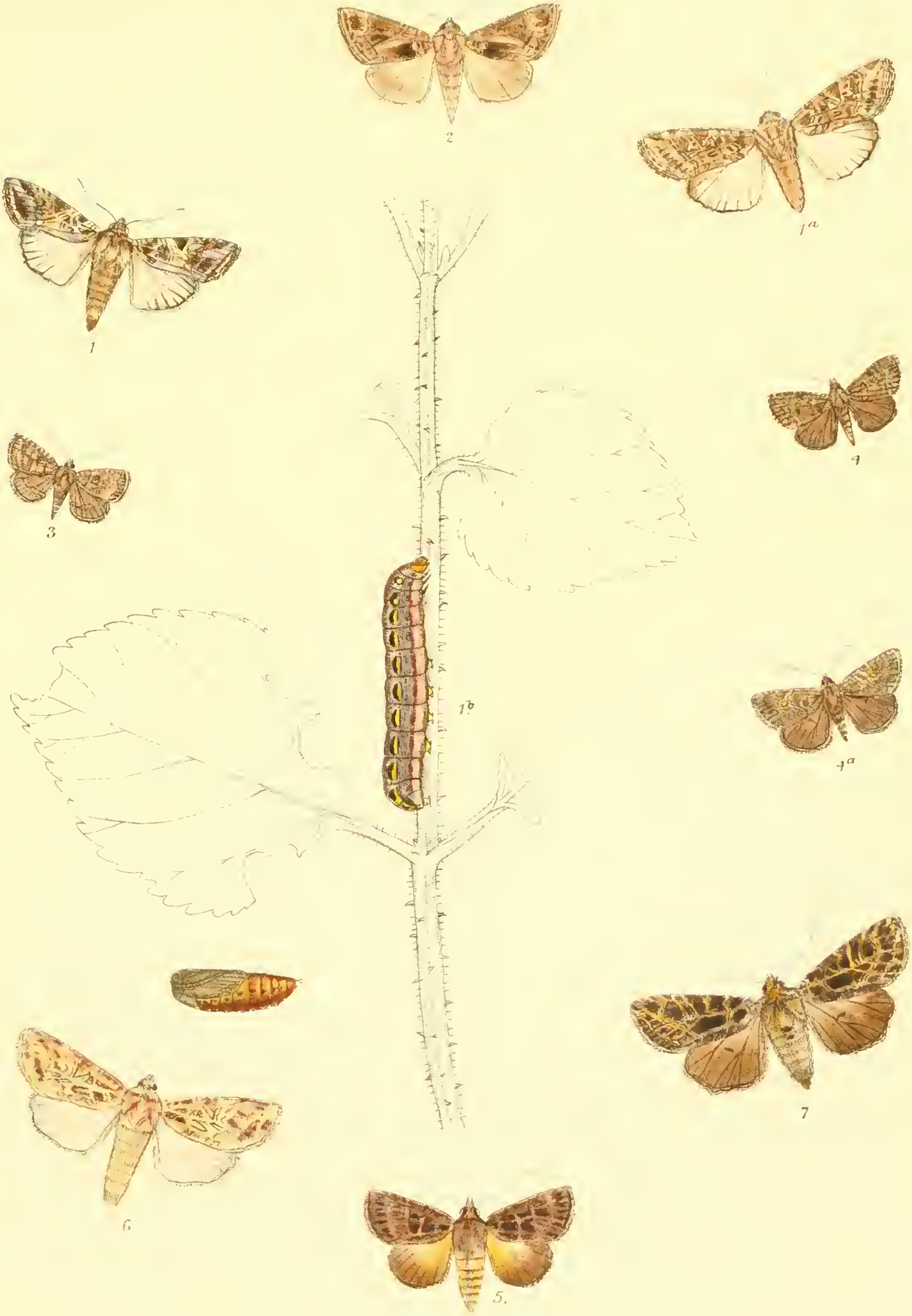

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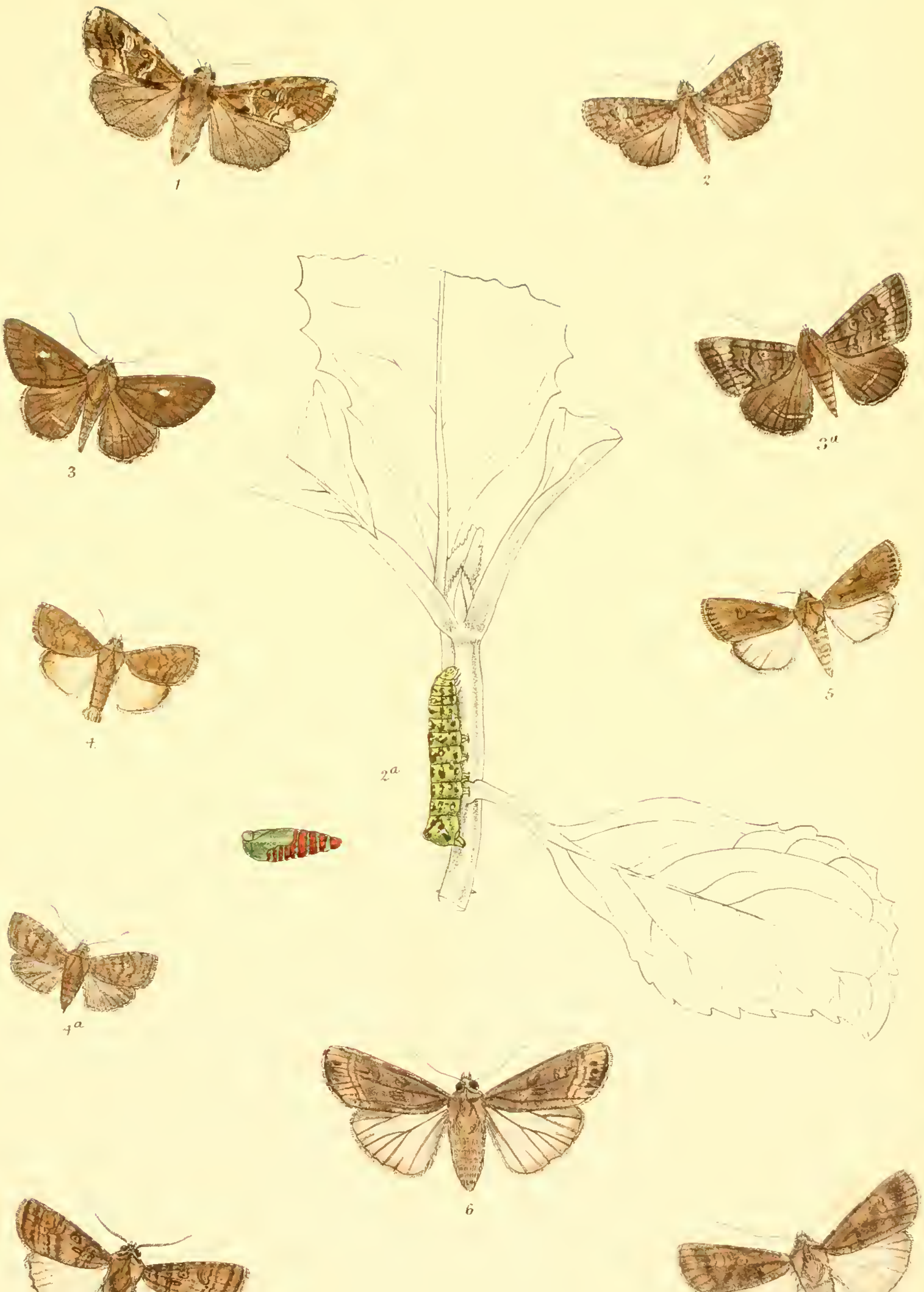

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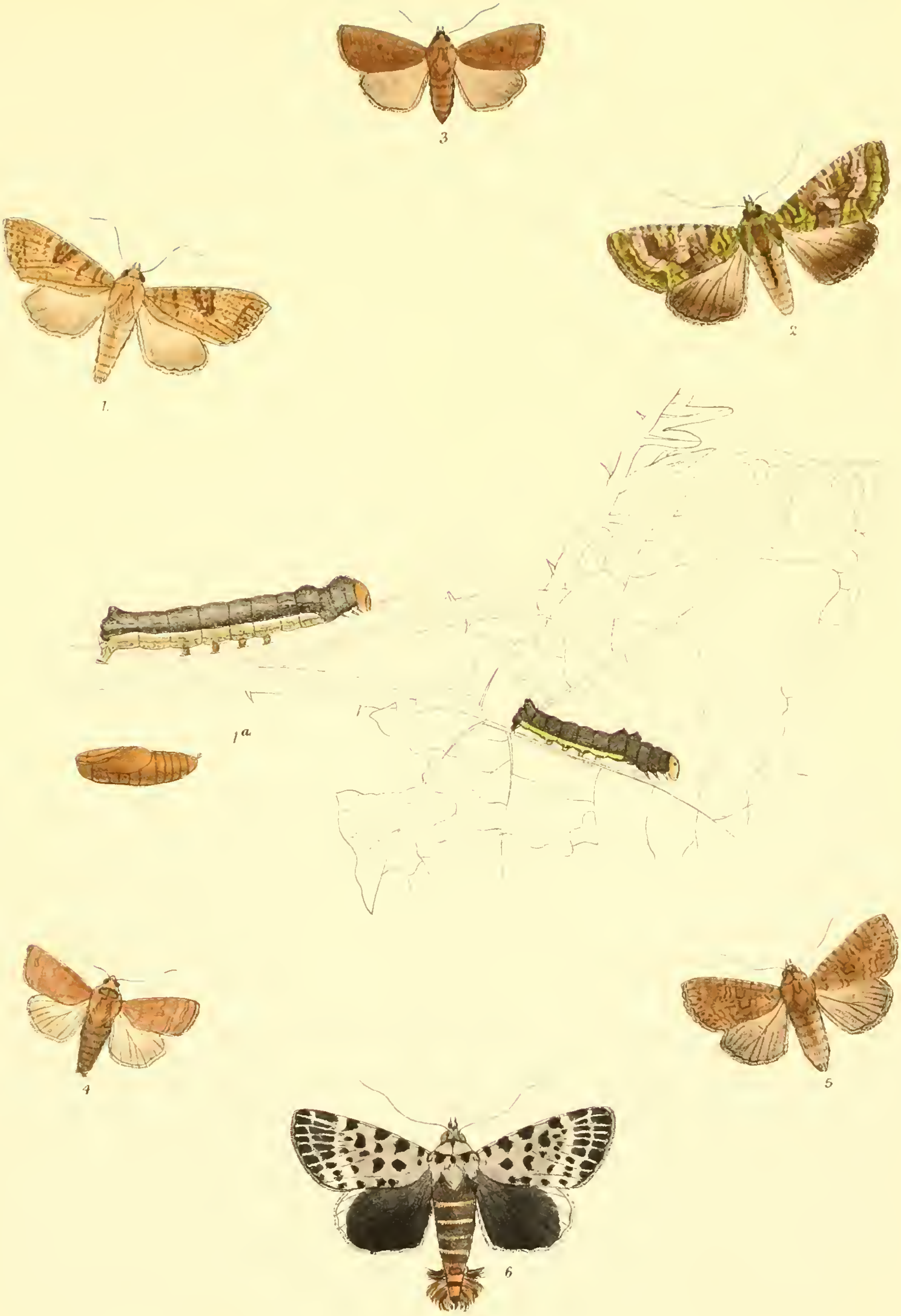

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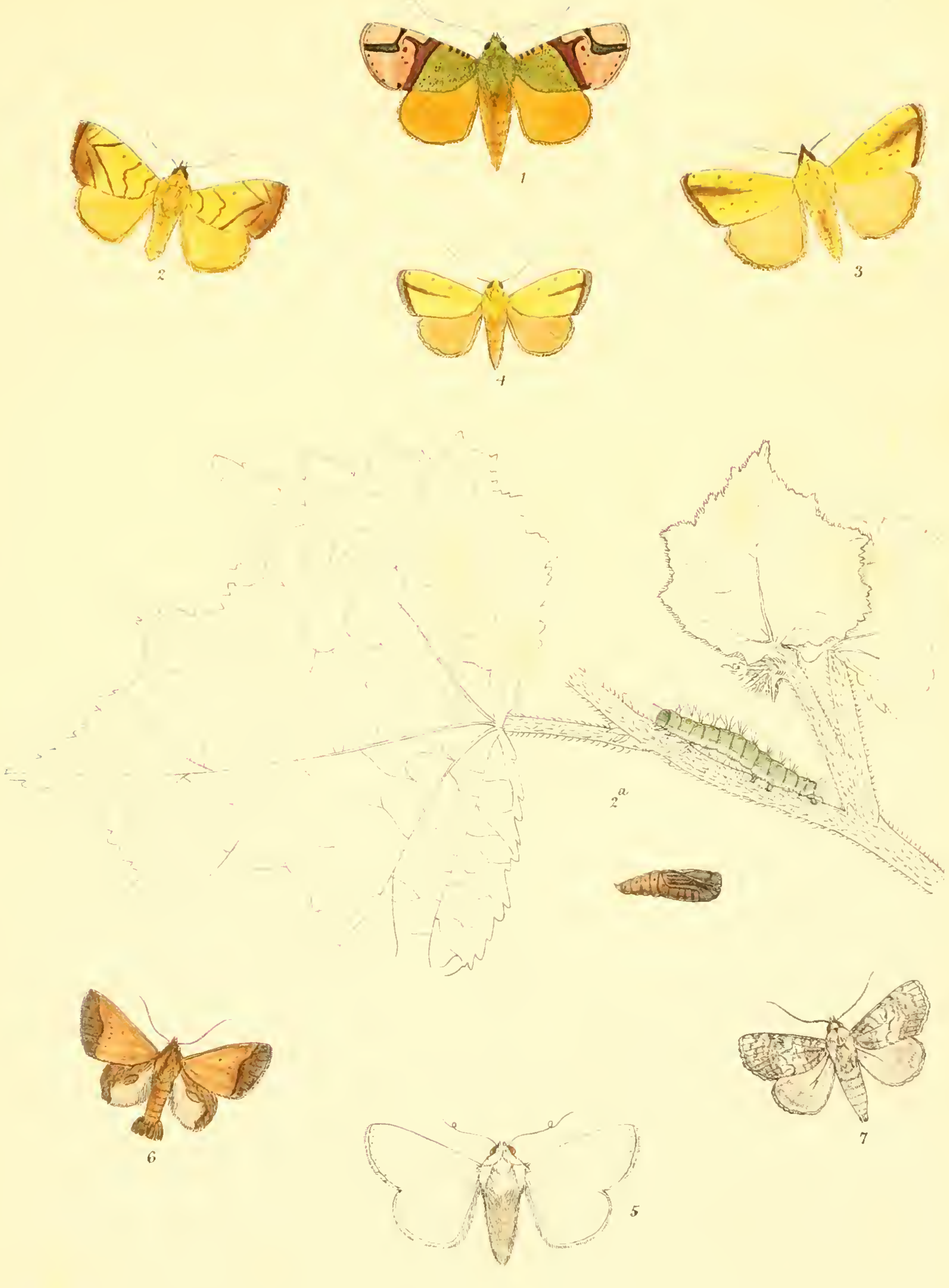

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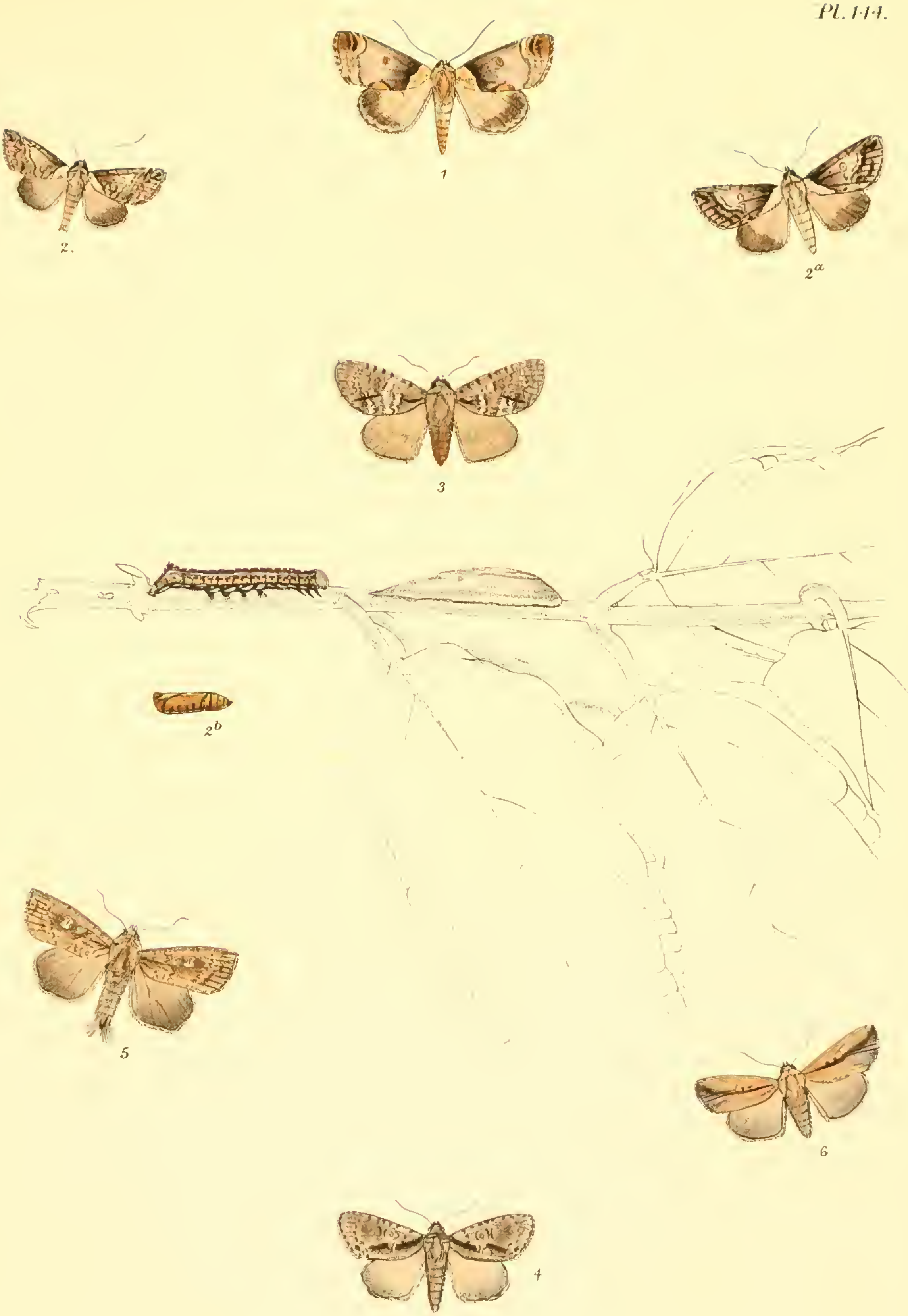

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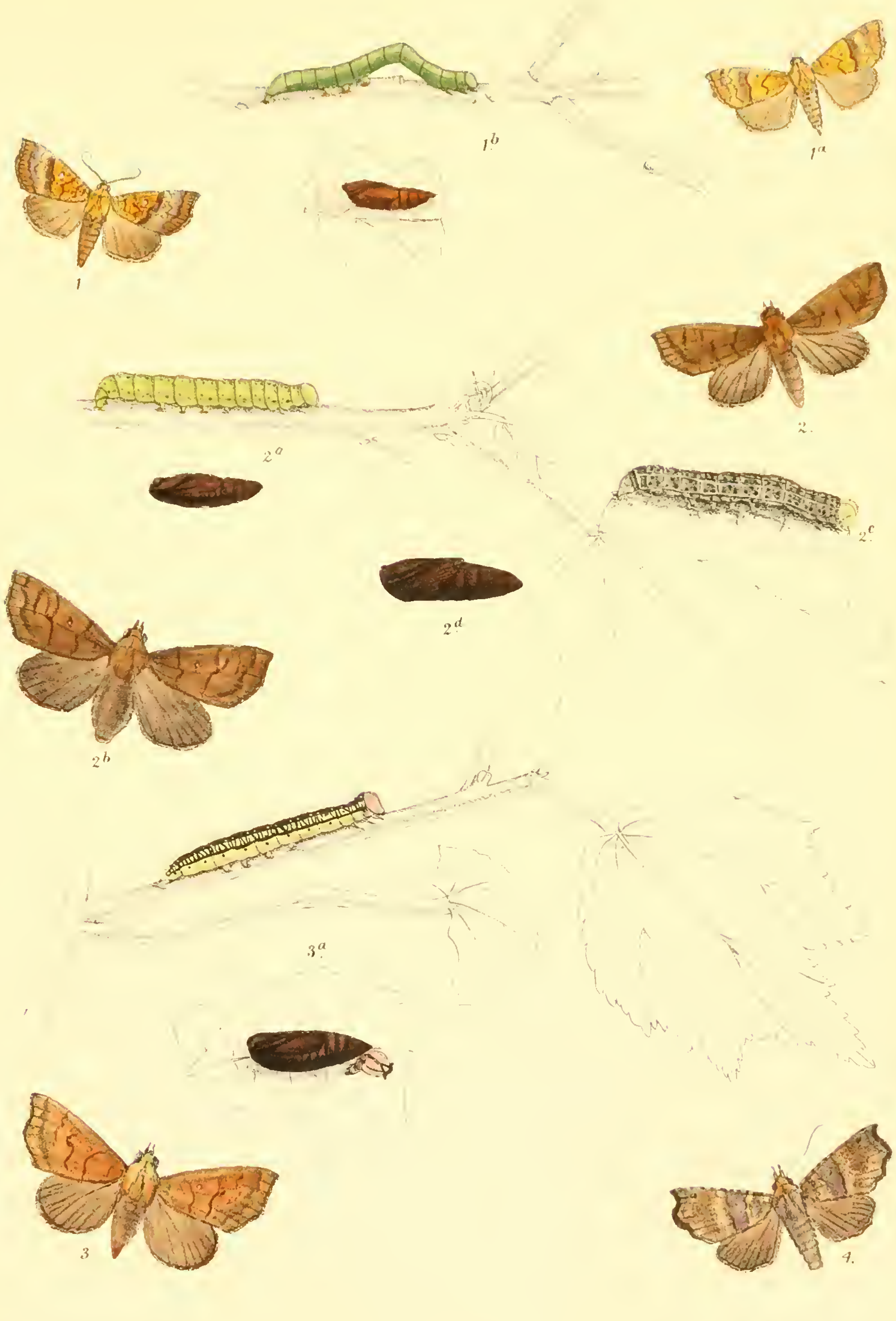

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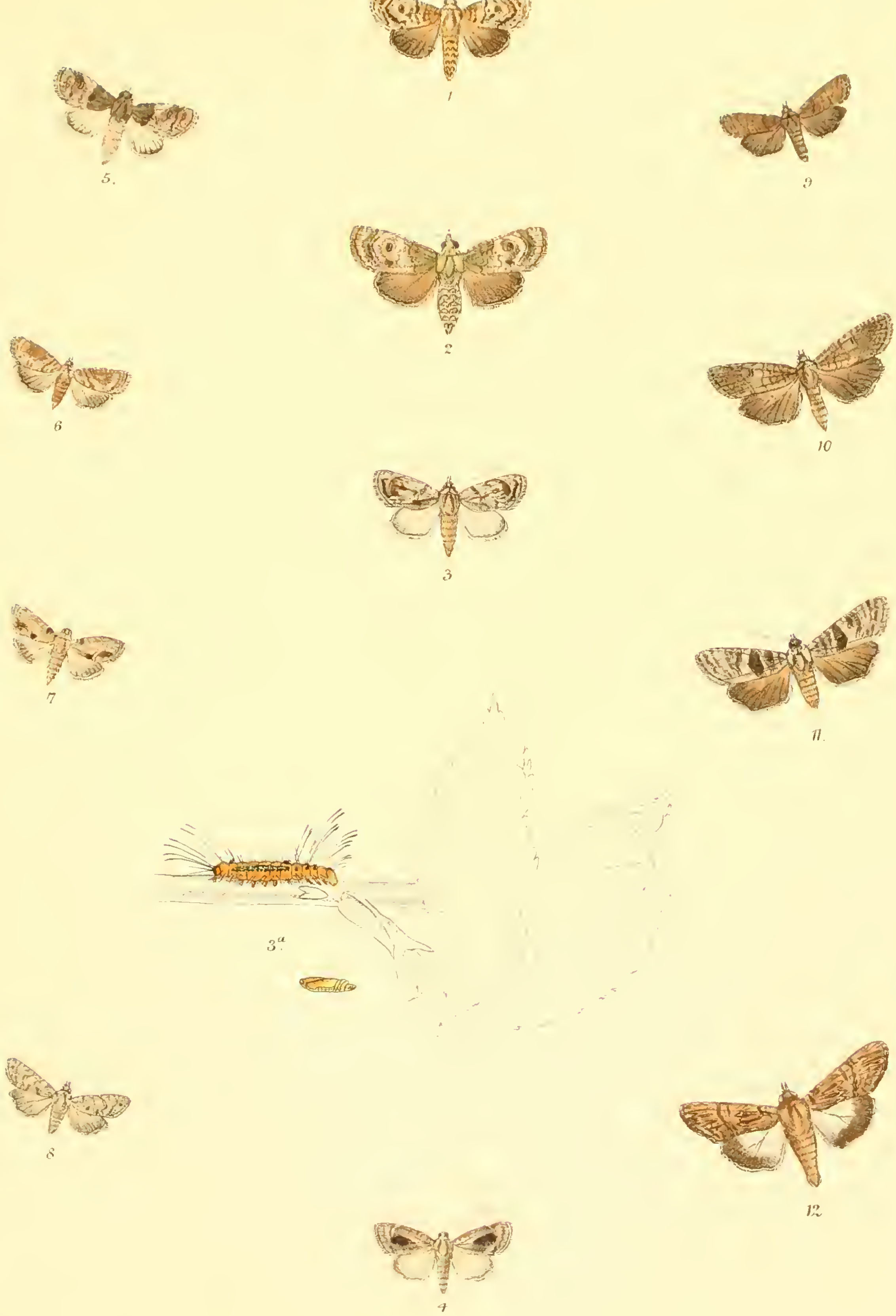

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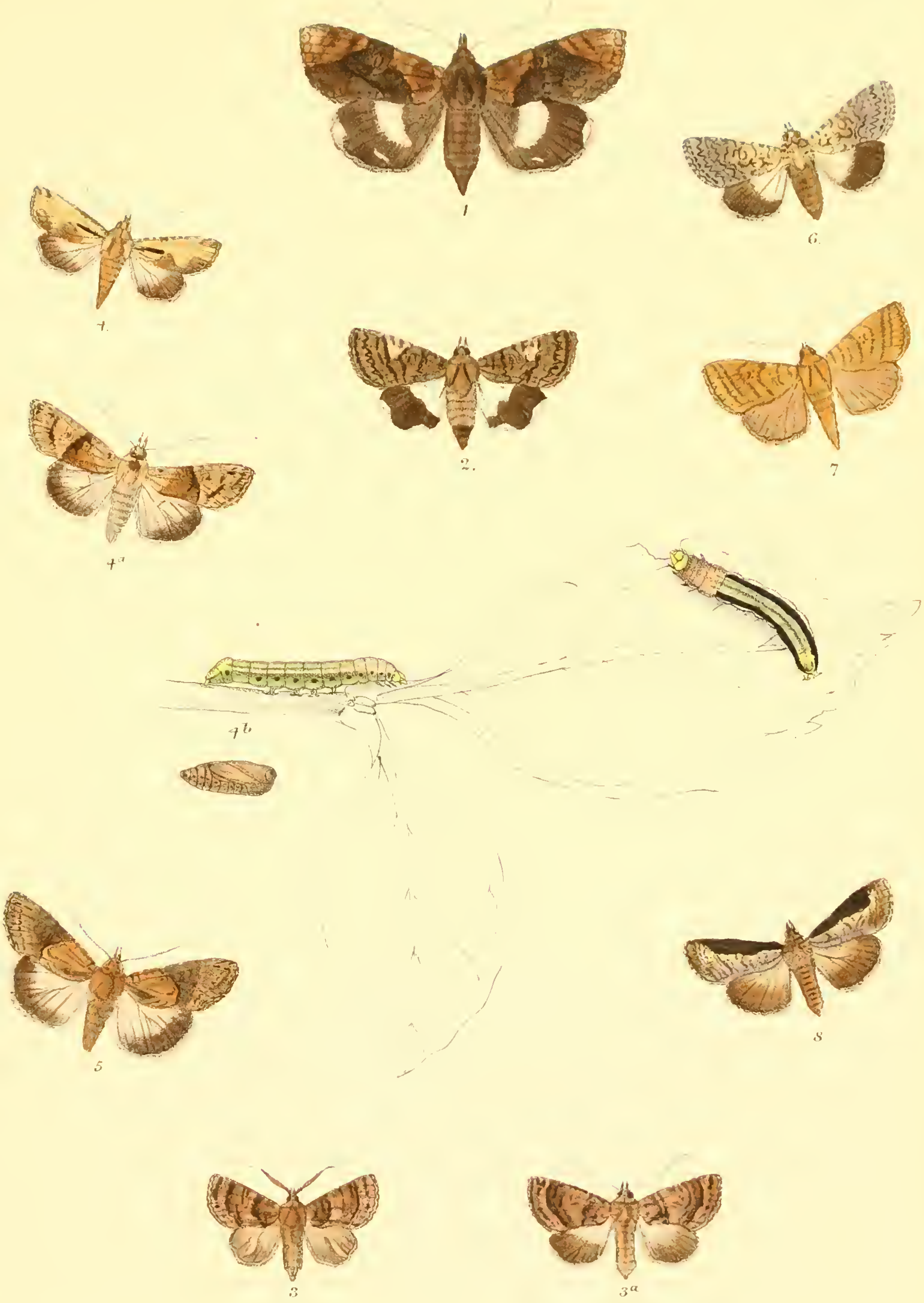

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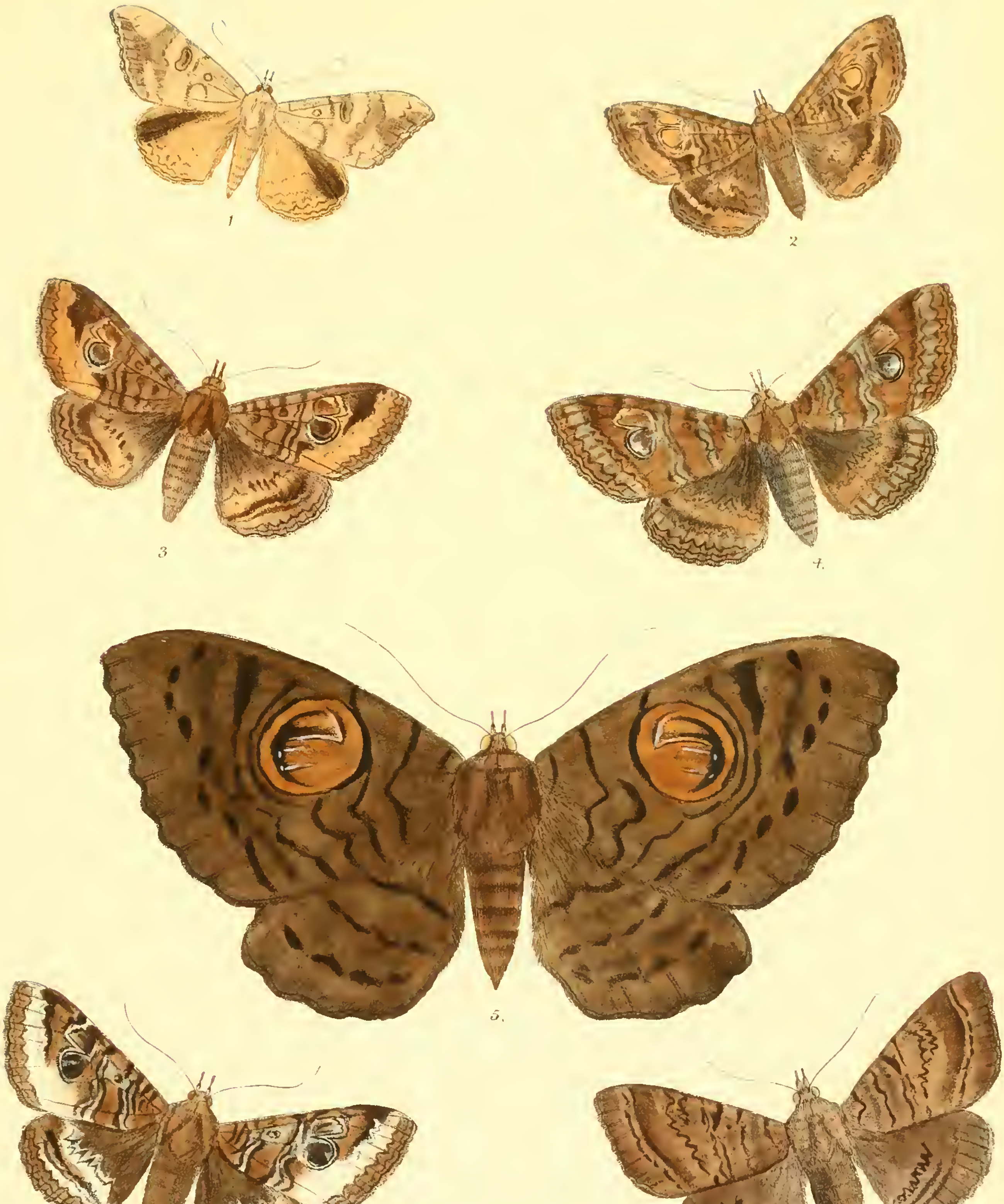

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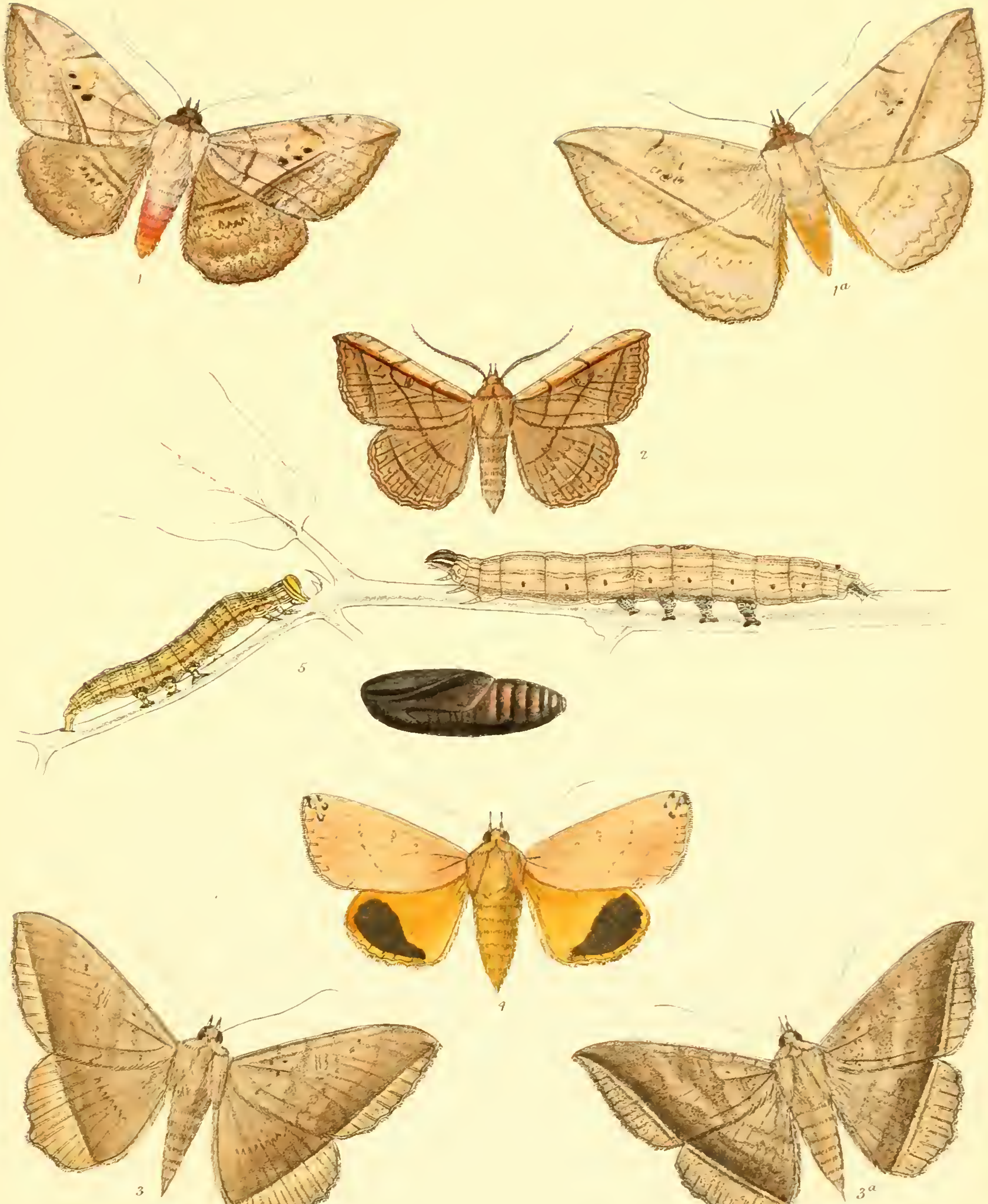

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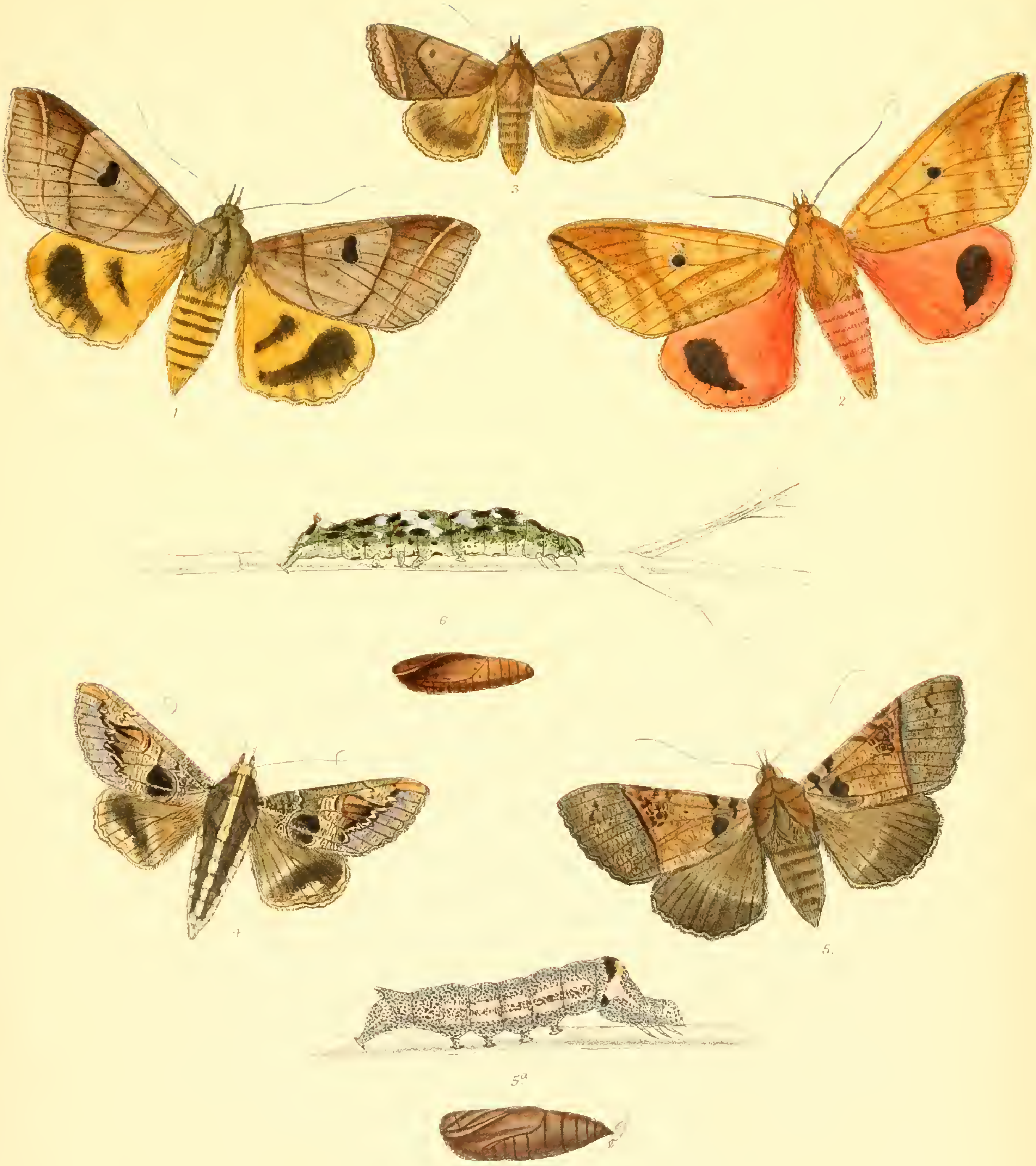

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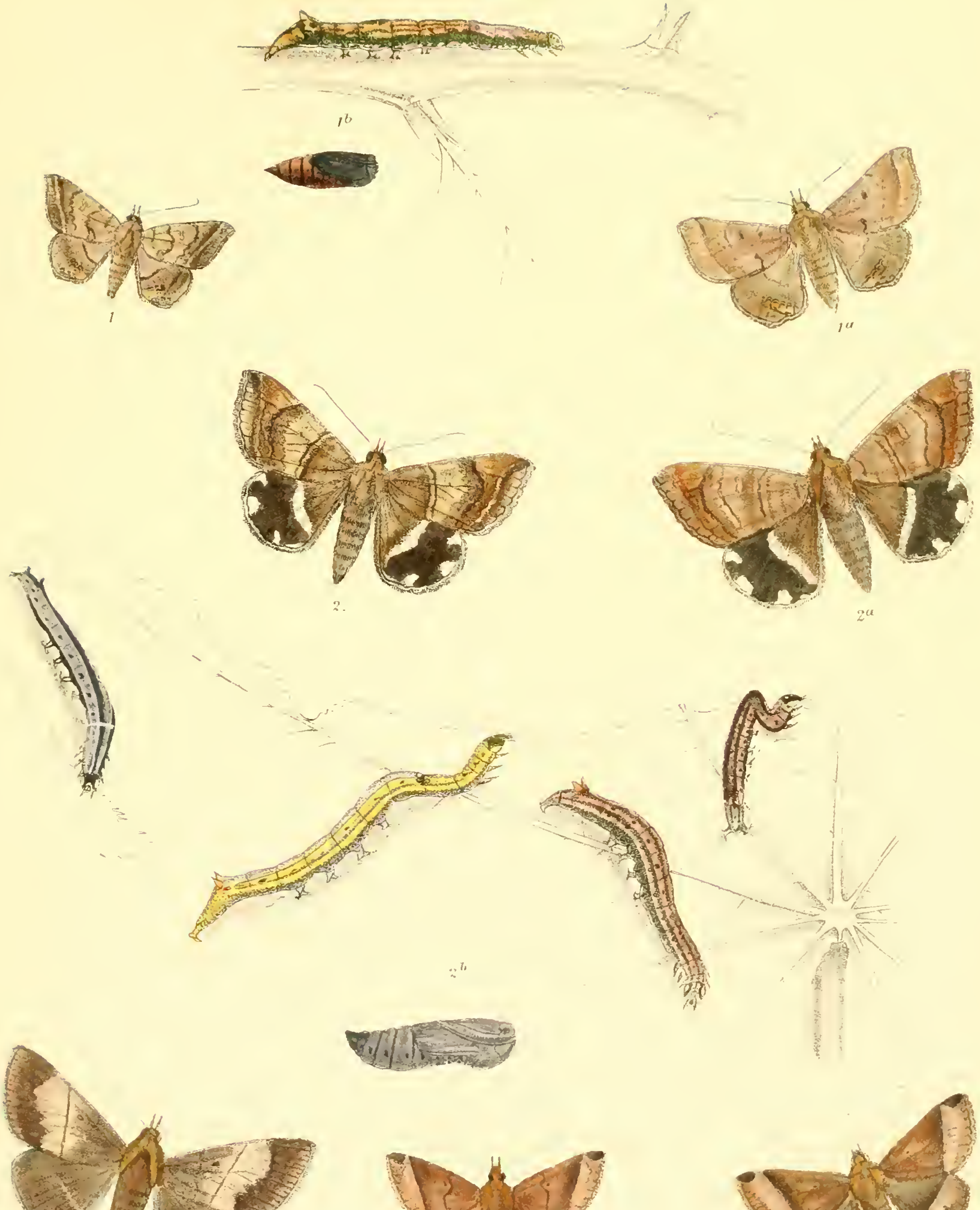

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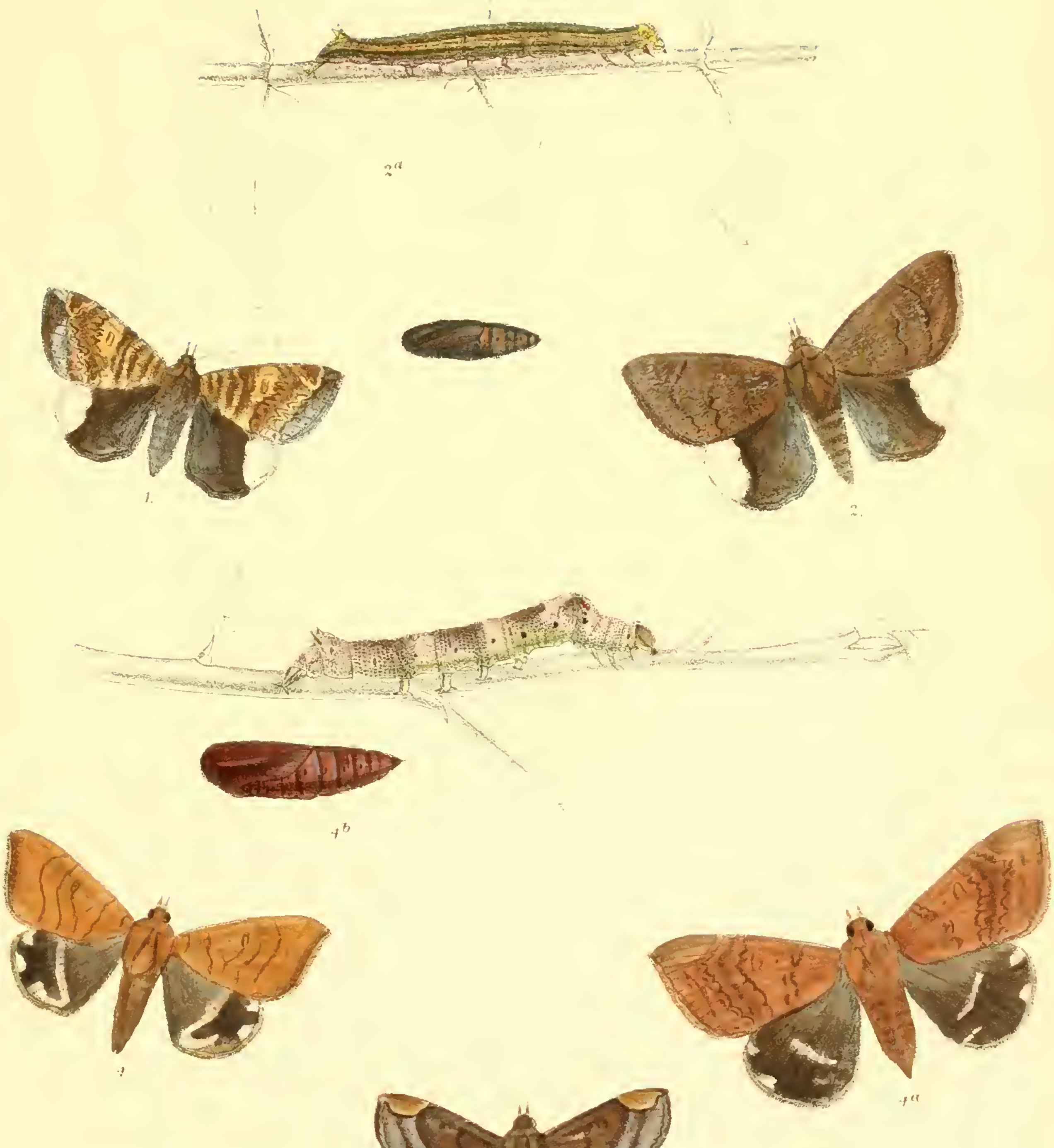

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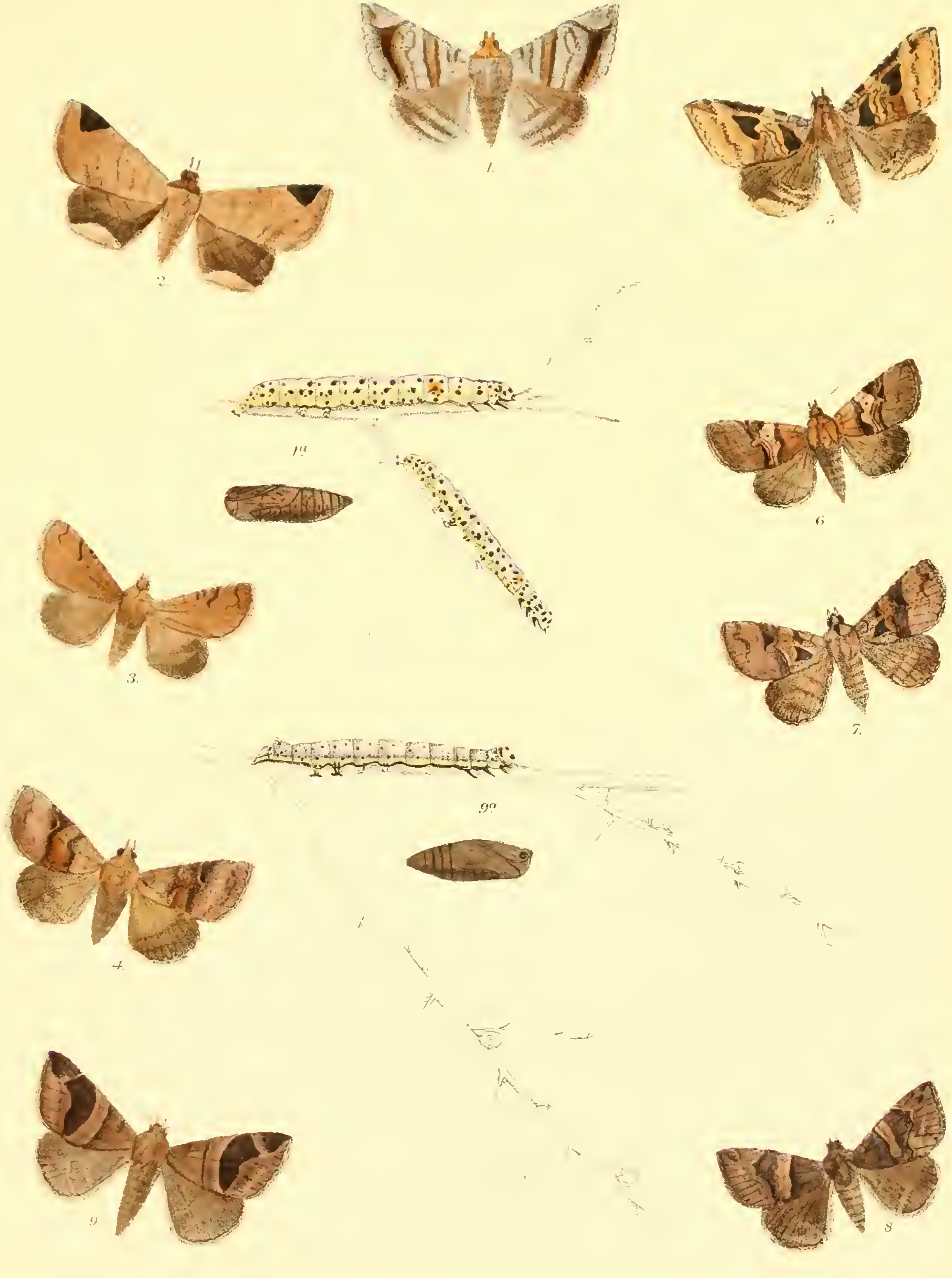

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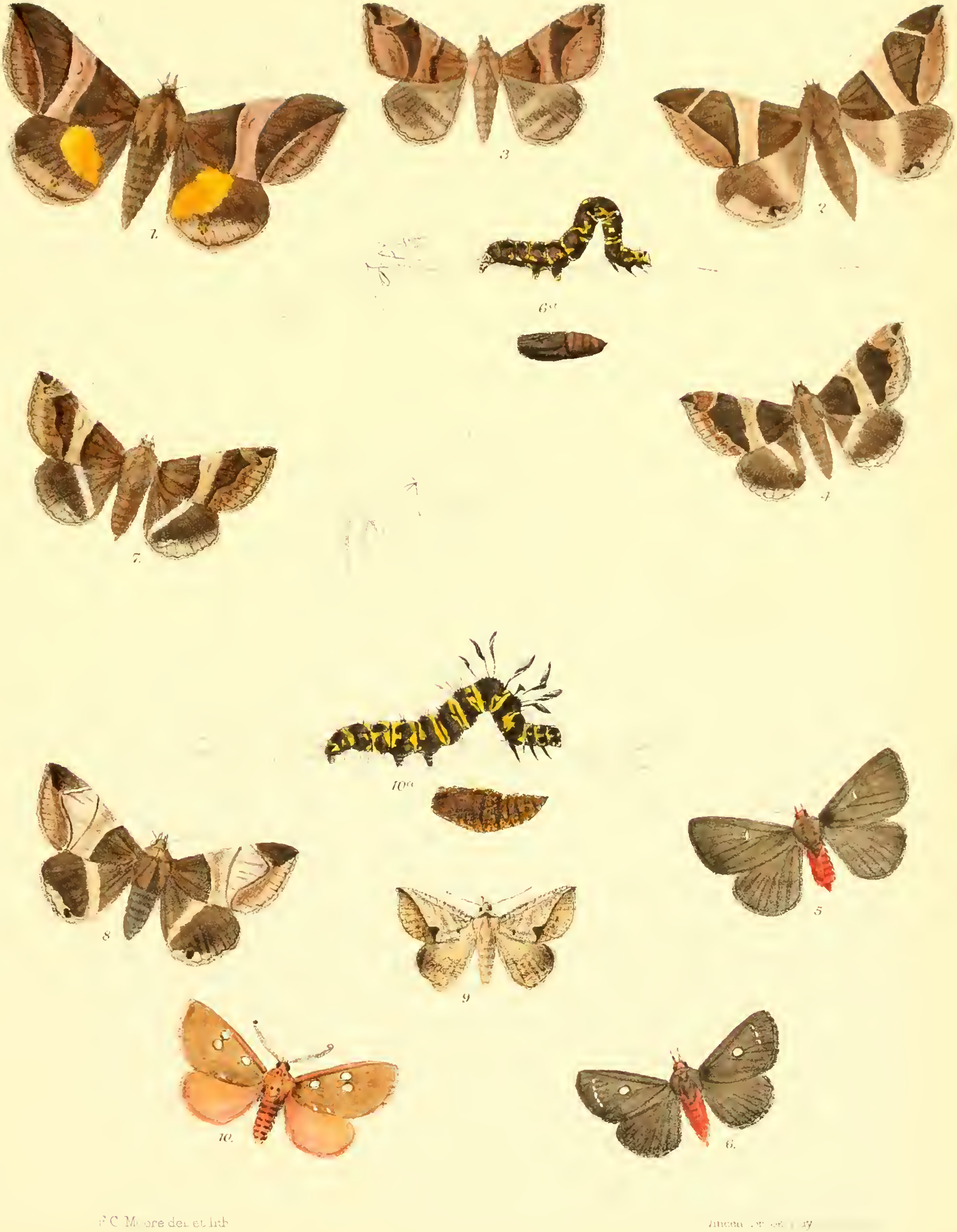

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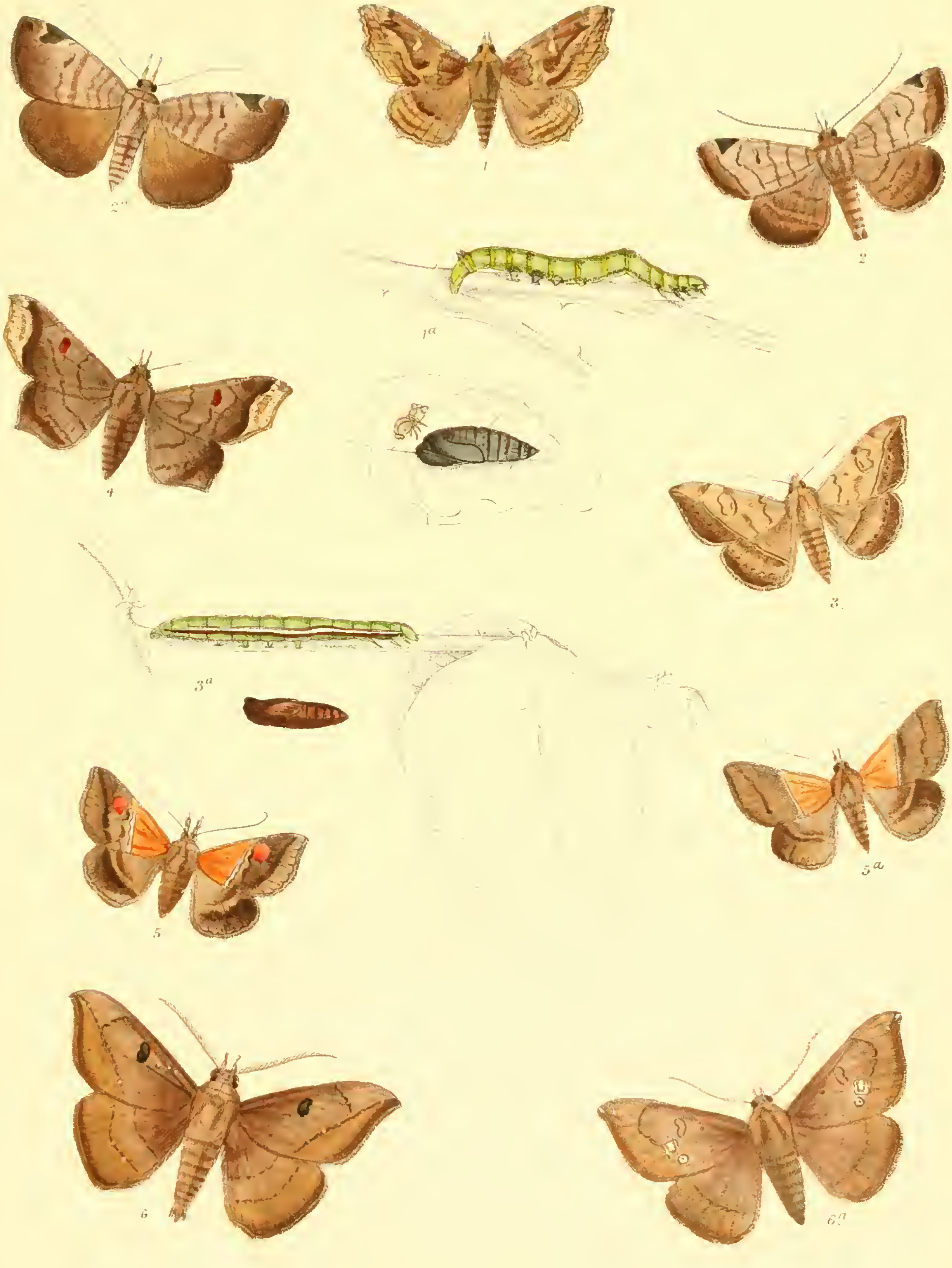

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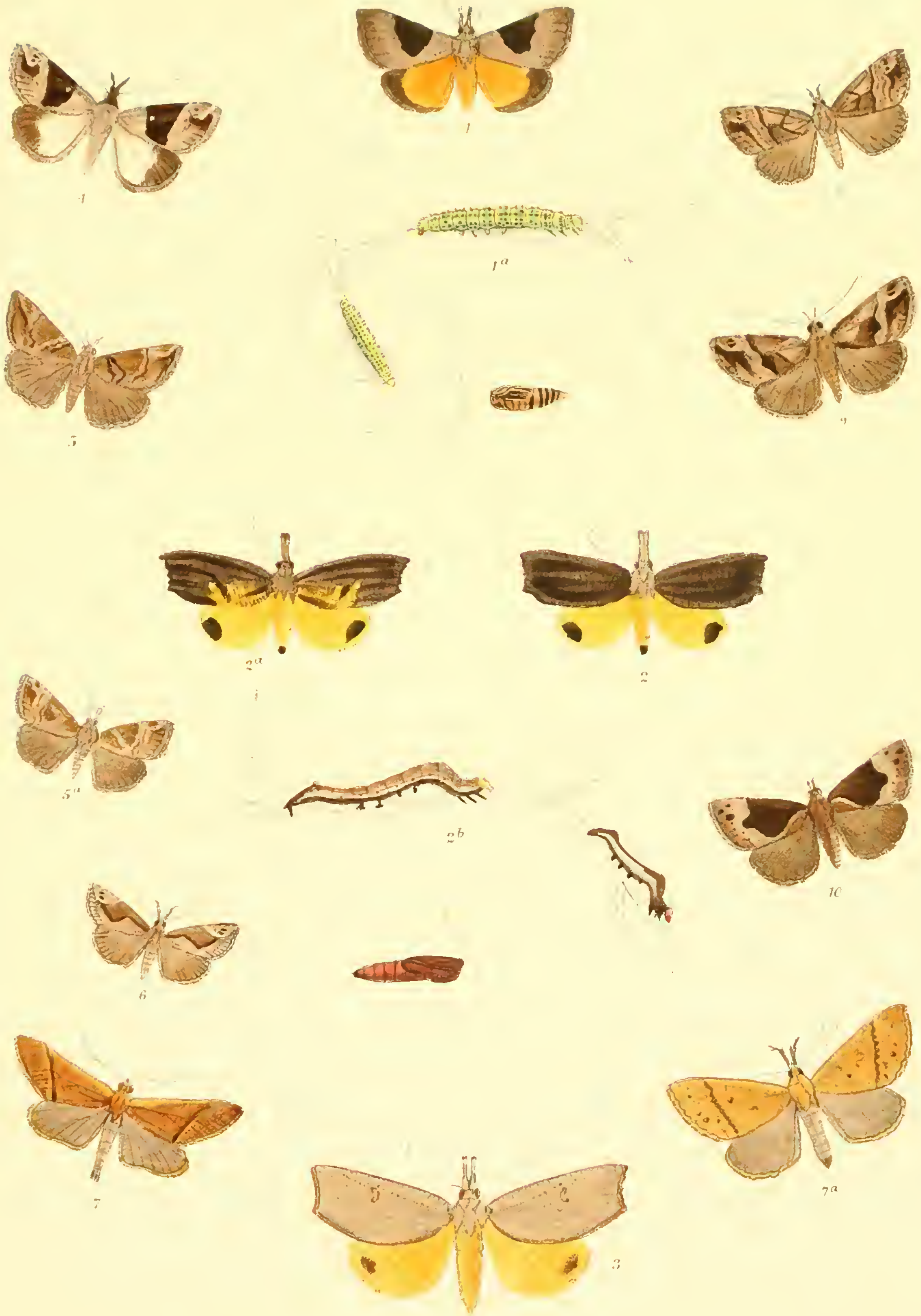

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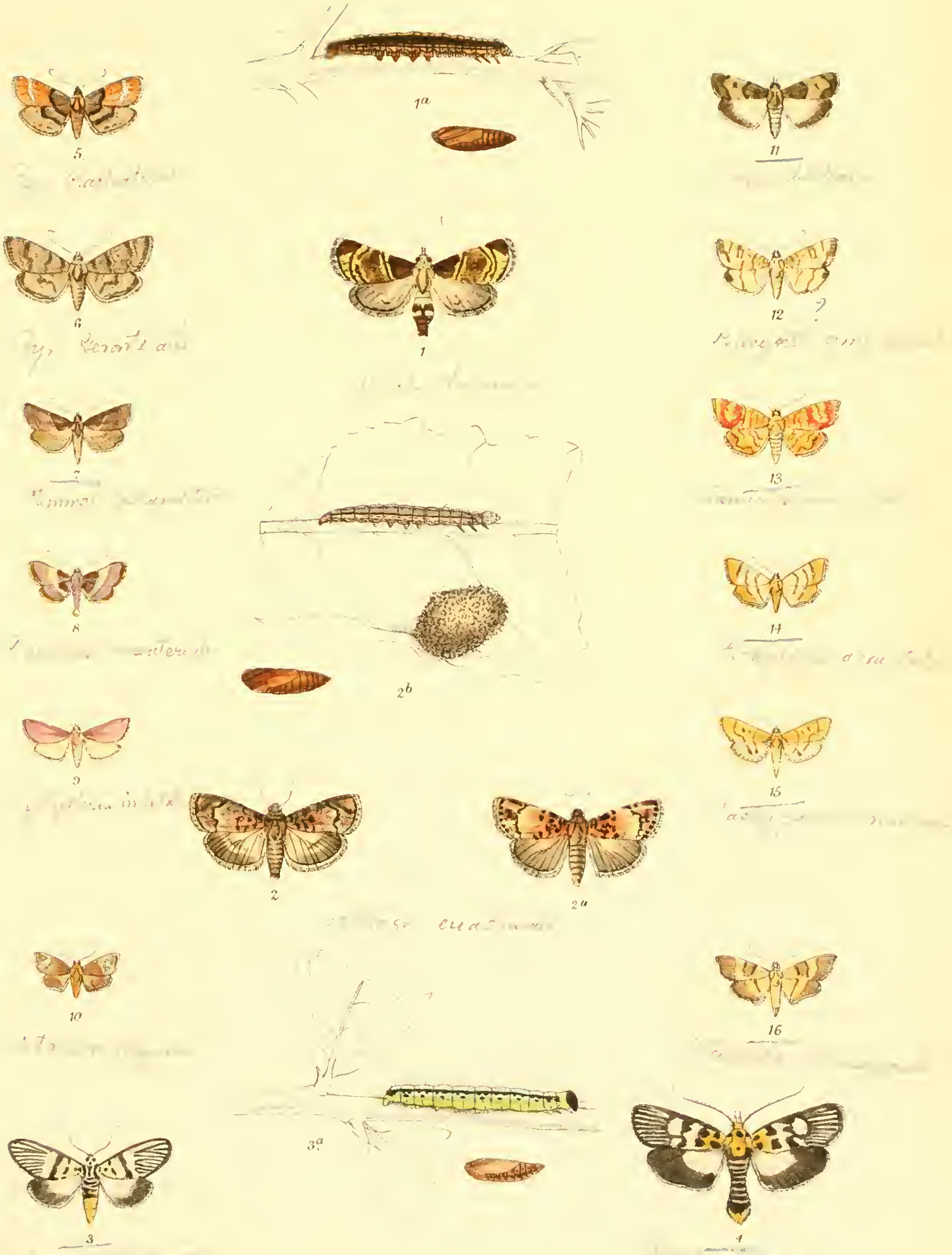

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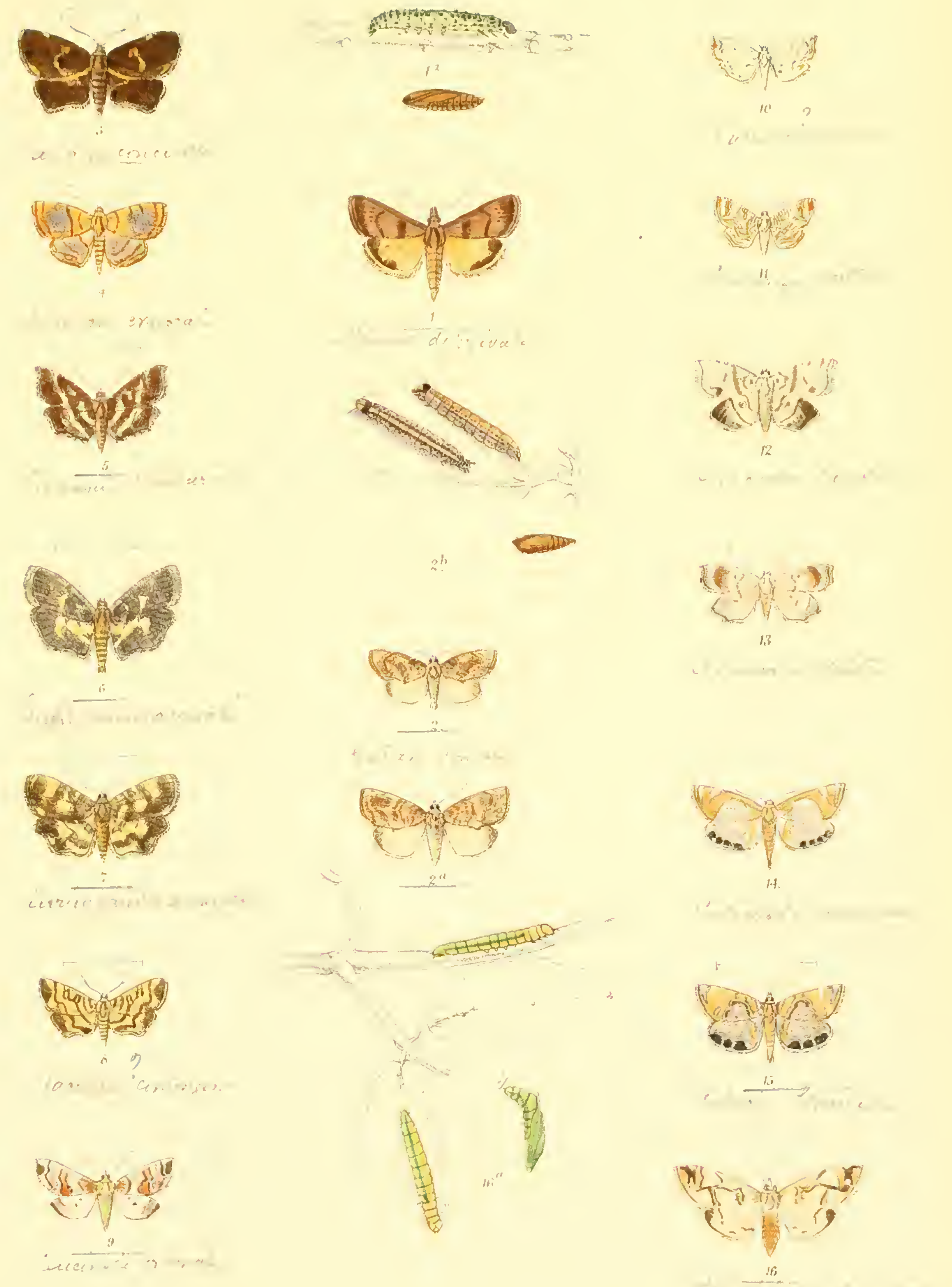
Pl 179.



Vincent Brooks Day & Son Imp

L Reeve & Co London

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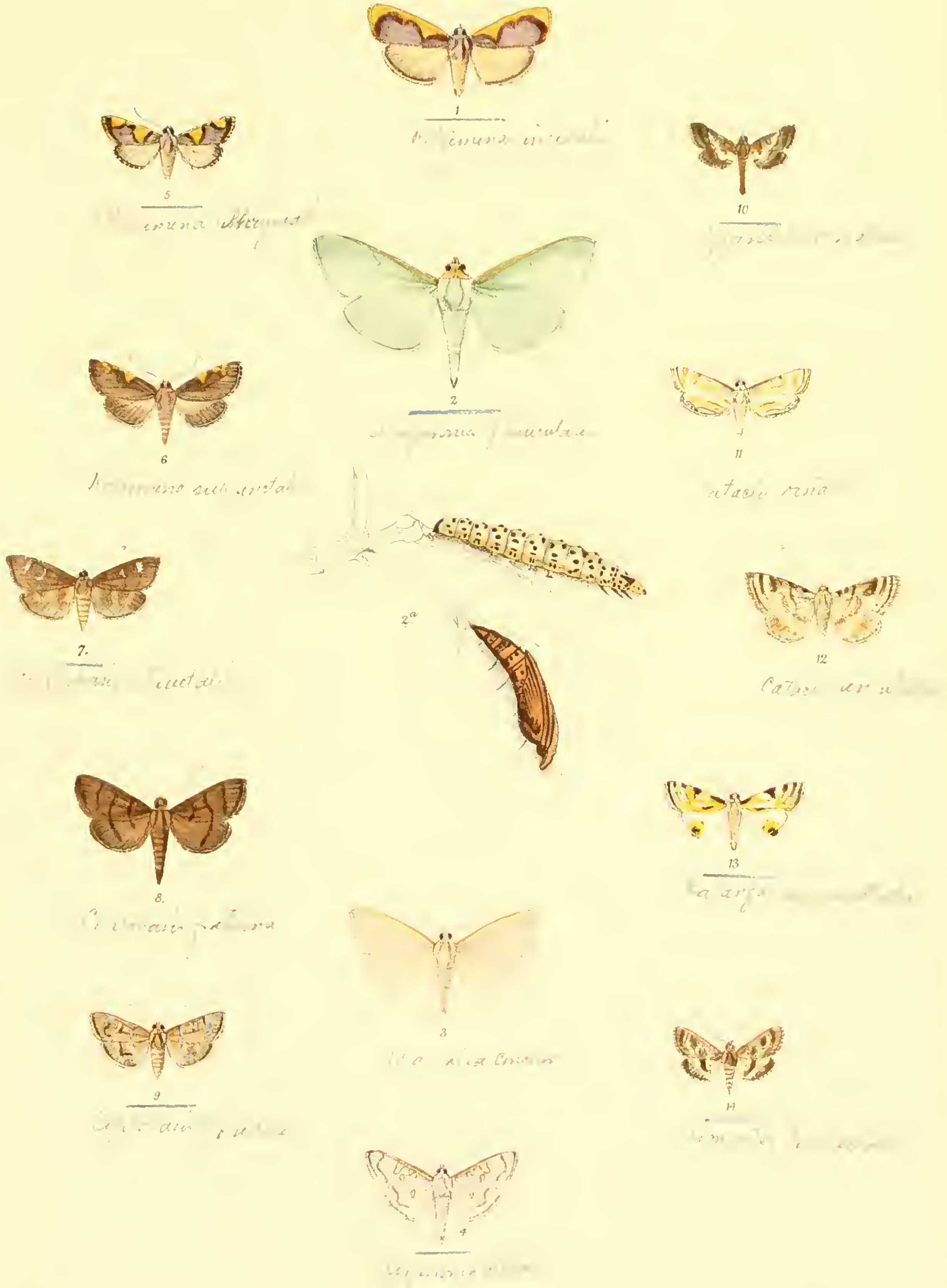

F C Moore del et lith

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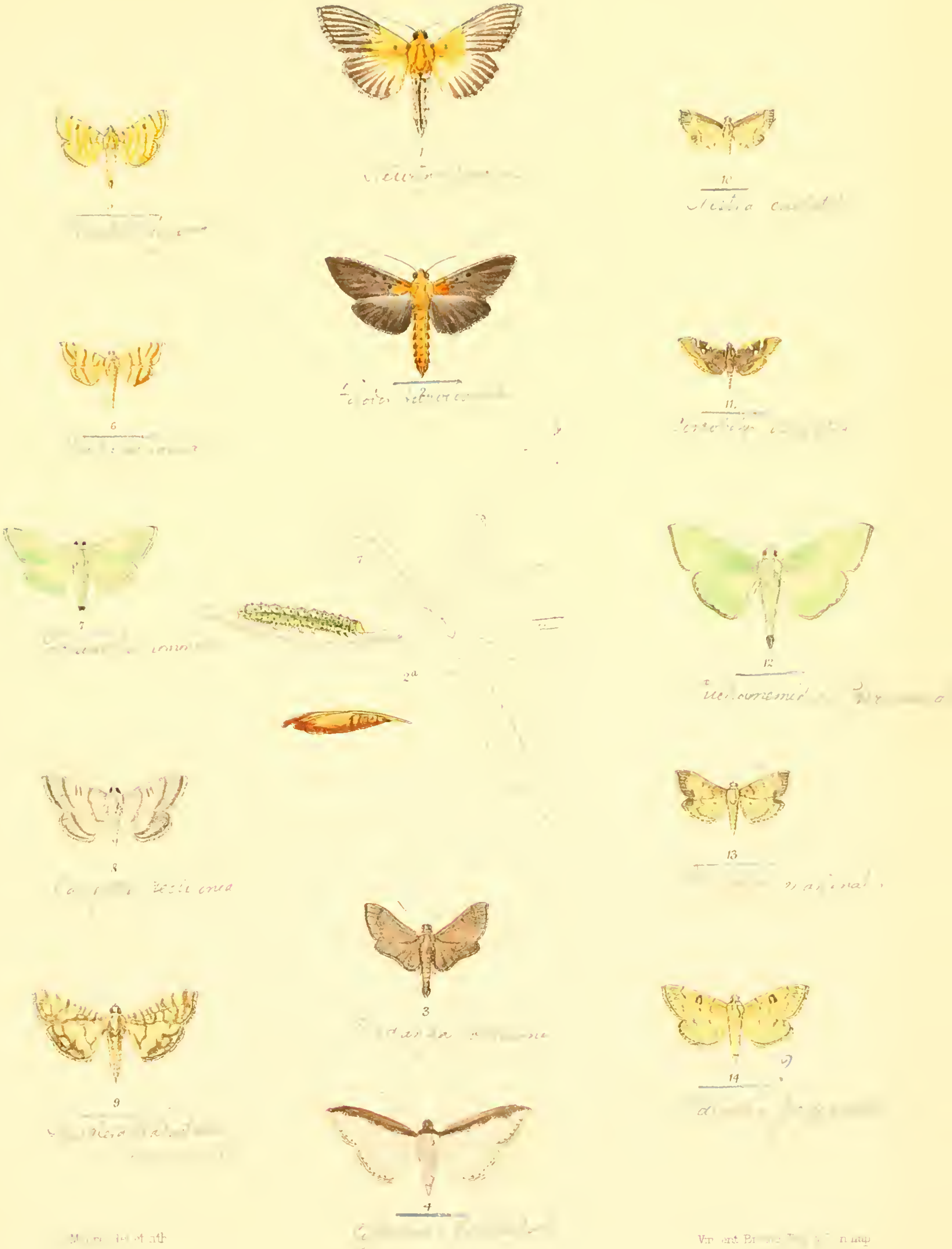
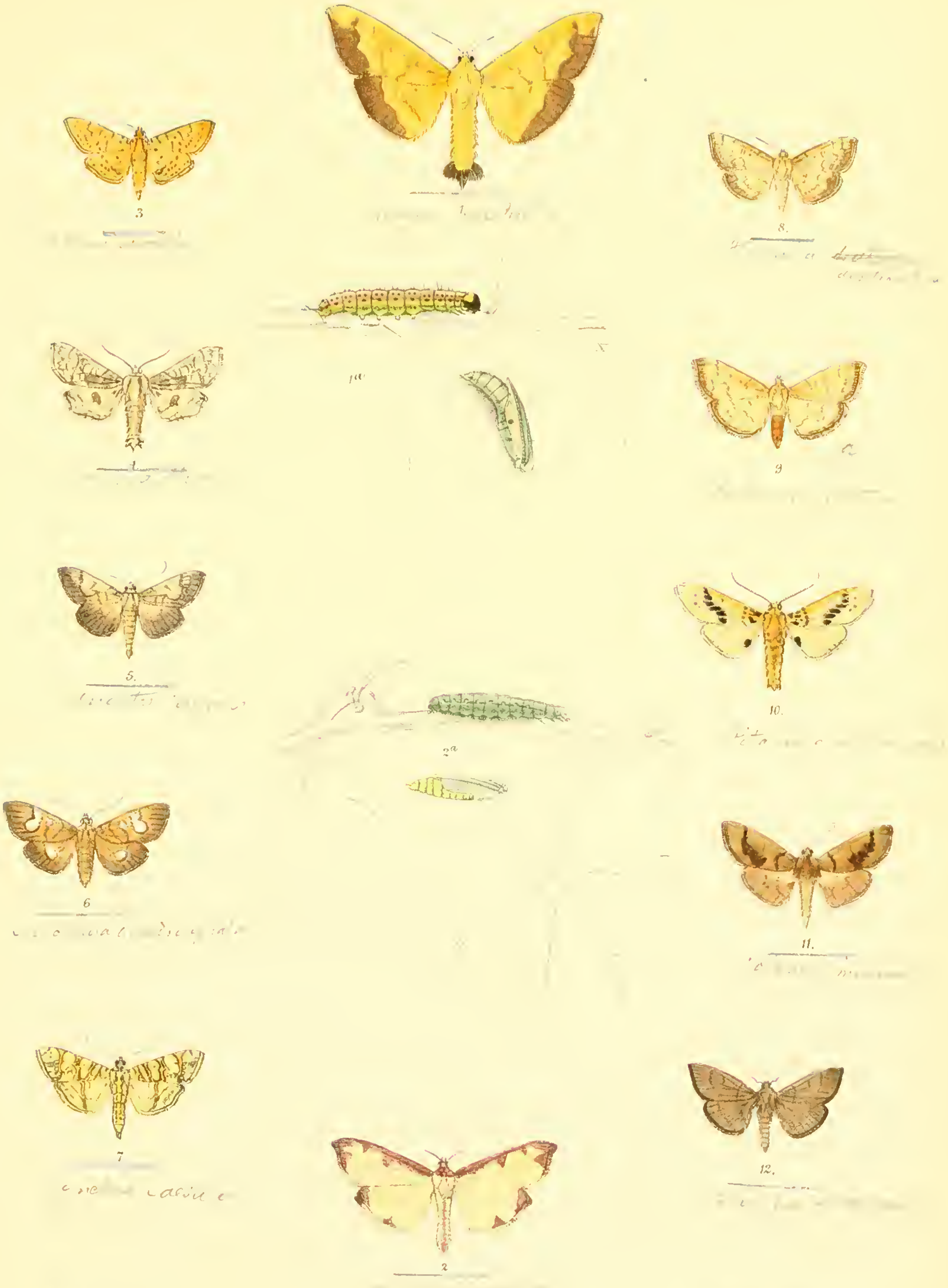
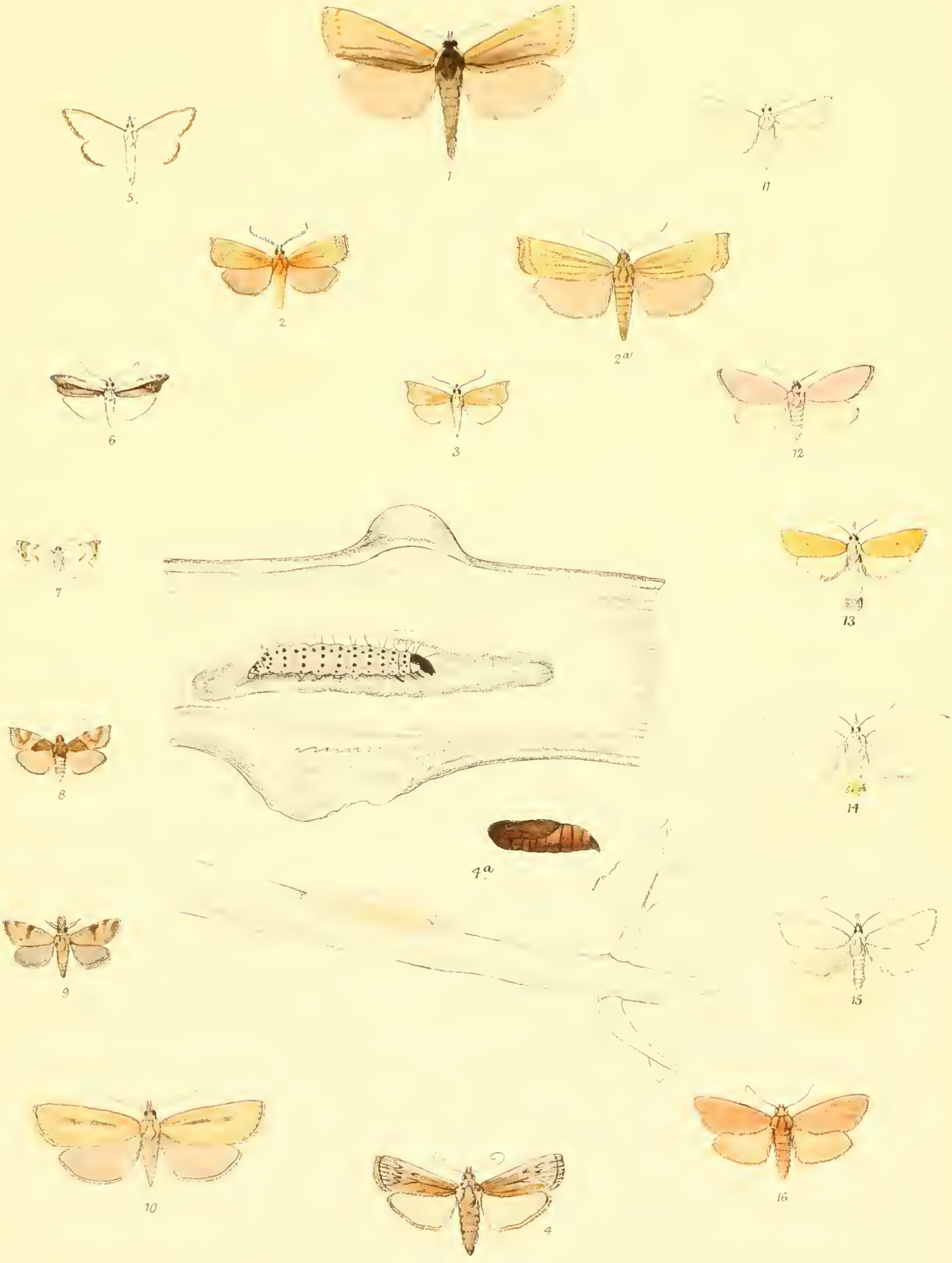


Pl. 183.





F. C. Moore del et lith.

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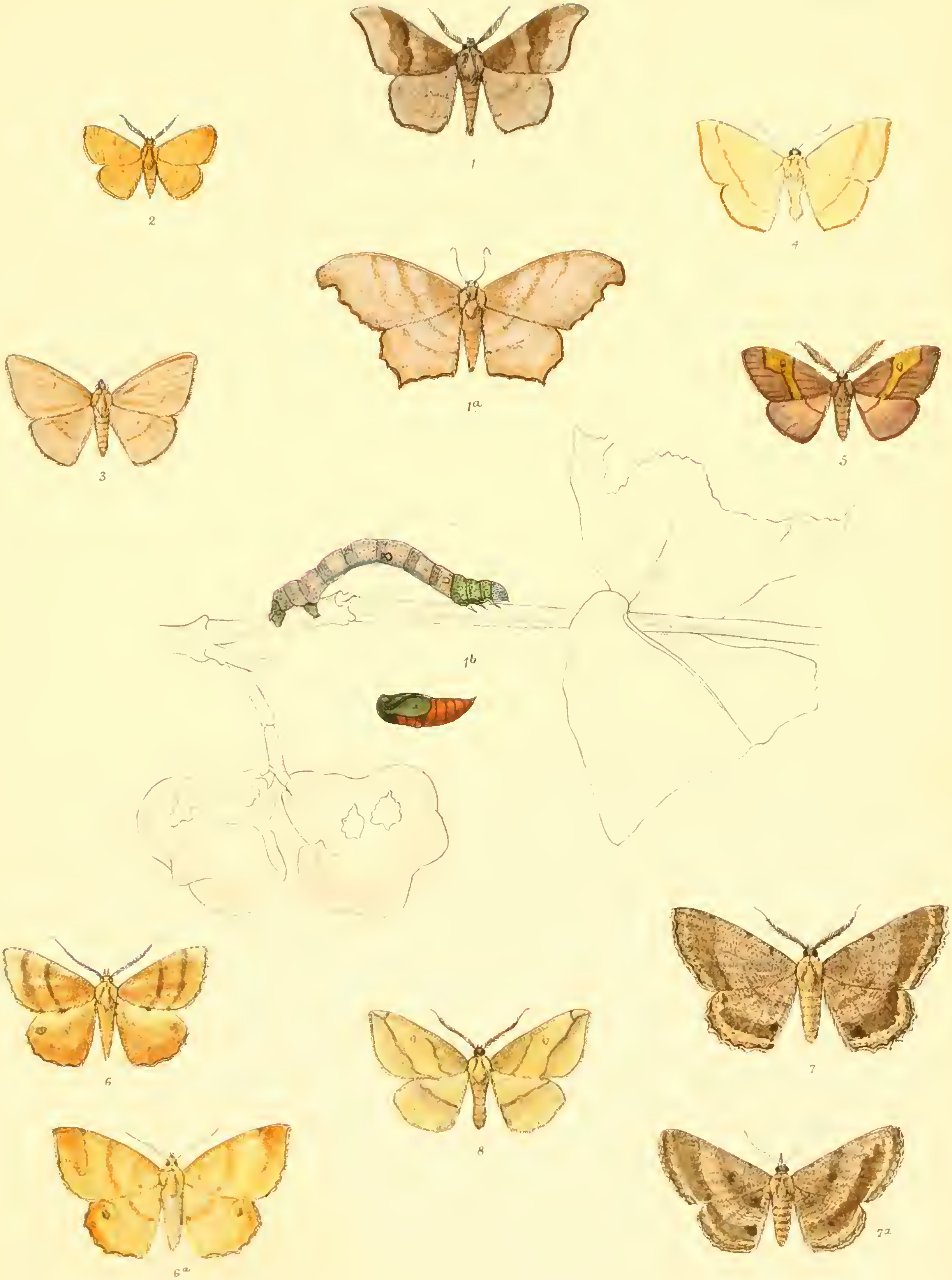

F.C. Moore del et lith

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F. C. Moore, del et lith.

Vincent Brooks, Day & Son, Imp.

L. Reeve & Co London.

F. C. Moore del. et lith.

Vincent Brooks Day & Son, Imp.

L. Reeve & Co. London

F. C. Moore del et lith.

Vincent Brooks, Day & Son Imp.

L. Reeve & Co. London

F. C. Moore del. et lith.

Vincent Brooks, Day & Son, Imp.

F. C. Moore, del et lith

Vincent Brooks Day & Son Imp

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F C Moore del et lith

Vincent Brooks Day & Son Imp

L Reeve & Co London

F. C. Moore del et lith.

Vincent Brooks Day & Son Imp

L Reeve & C° London

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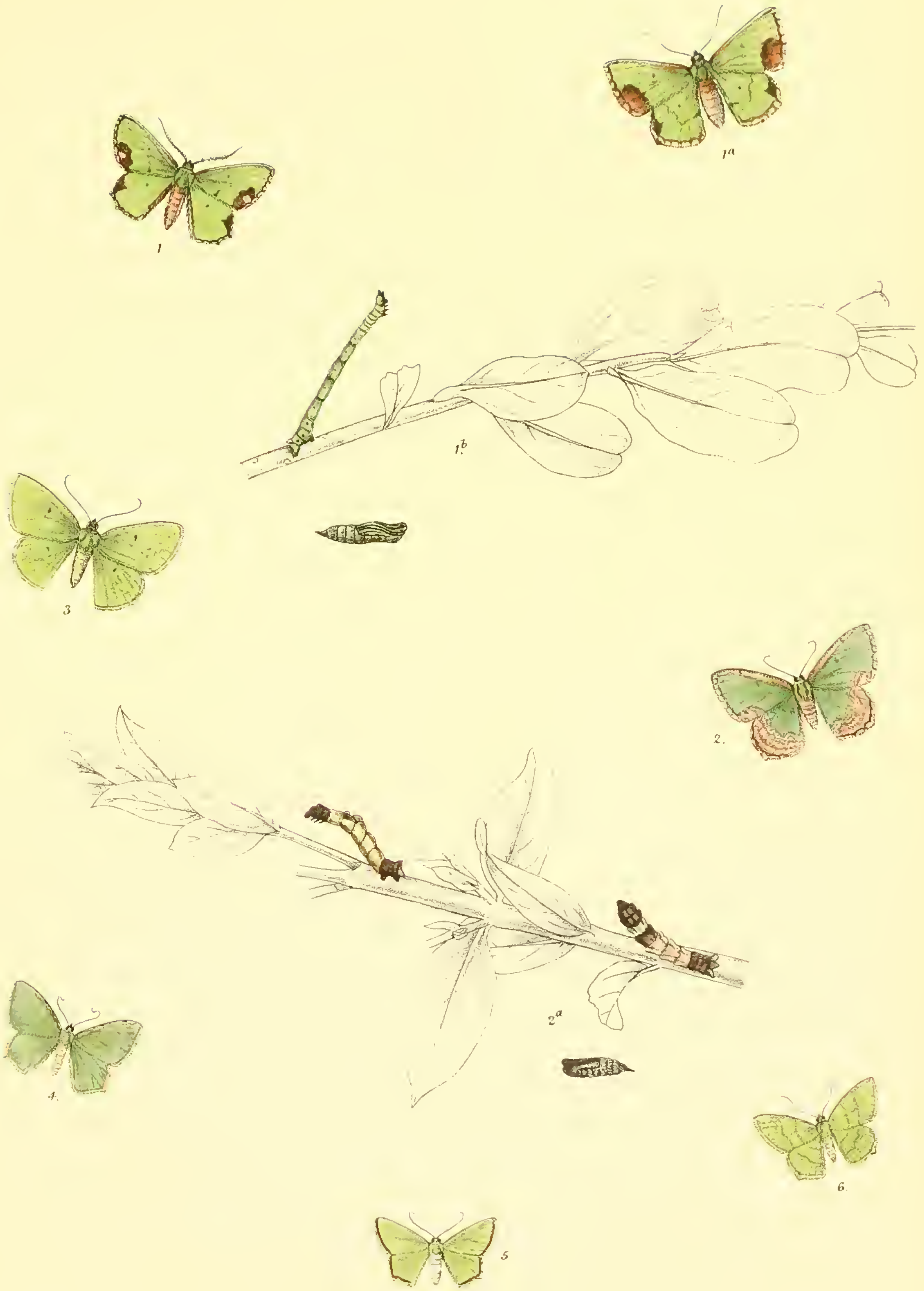
Vincent Brooks Day & Son Imp

L Reeve & Co London

F.C. Moore del et lith

Vincent Brooks Day & Son Imp

L. Reeve & Co. London



F C Moore del et lith.

Vincent Brooks Day & Son Imp.

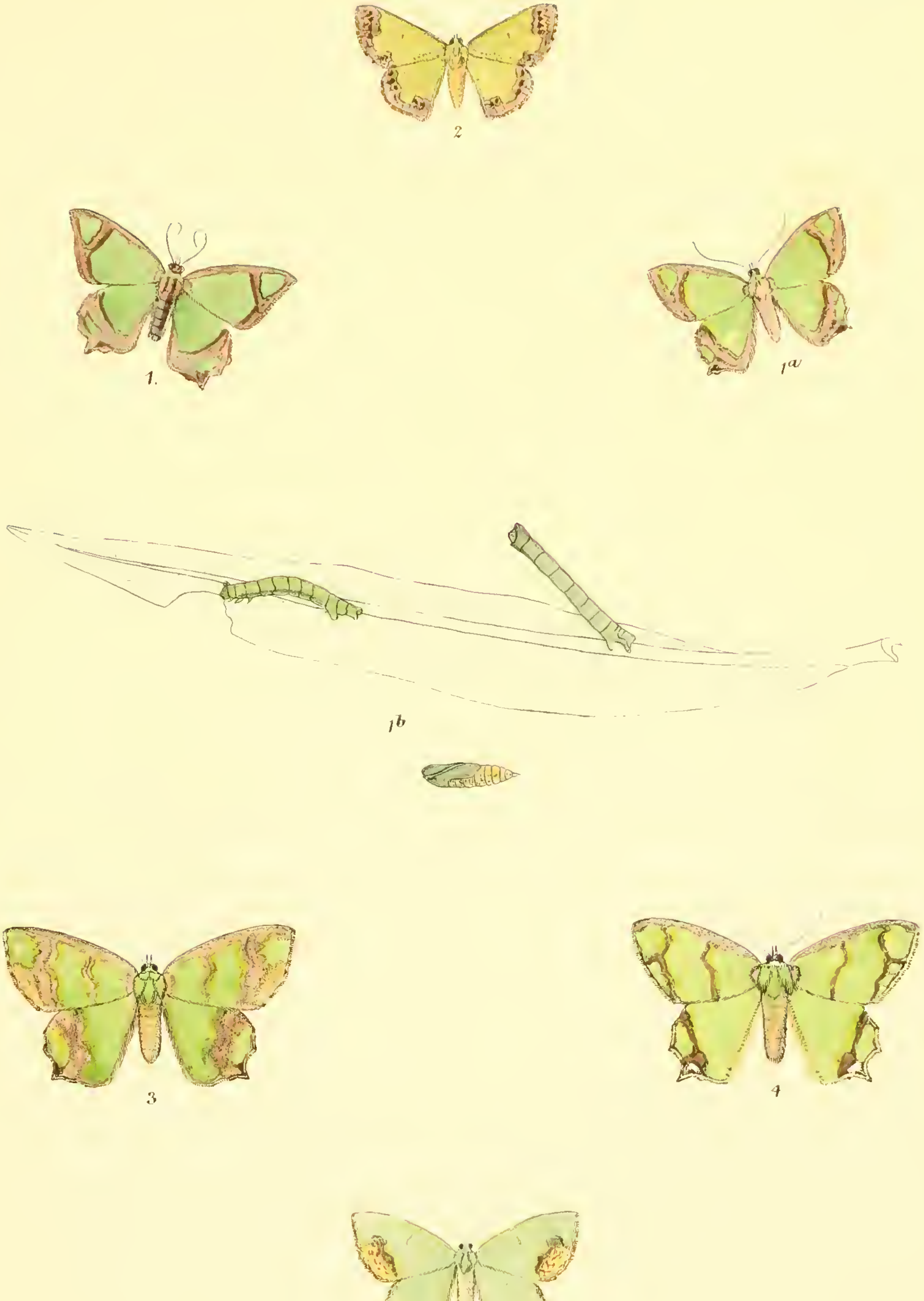
L Reeve & Co London.

Pl. 196.

F. C. Moore del et lith. Vincent Brooks Day & Son Imp.

L. Reeve & C° London

Pl 197.



F C Moore del, et lith

Vincent Brooks Day & Son Imp

L Reeve & C° London

F. C. Moore del et lith.

Vincent Brooks, Day & Son Imp.

L. Reeve & Co London

F. Moore del. et lith.

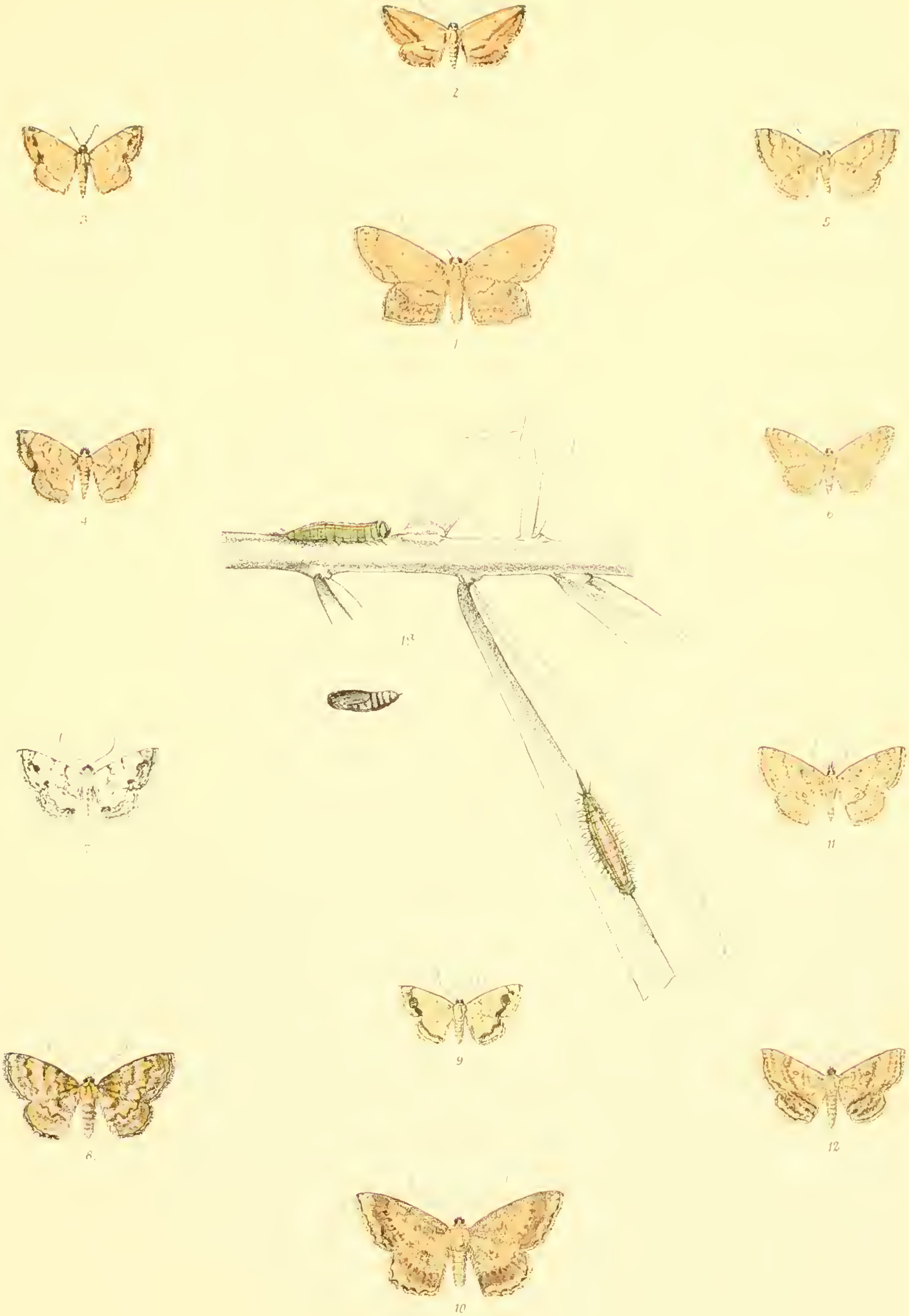
Vincent Brooks Day & Son imp.

L. Reeve & Co. London.

F. C. Moore del. et lith.

Vincent Brooks Day & Son Imp.

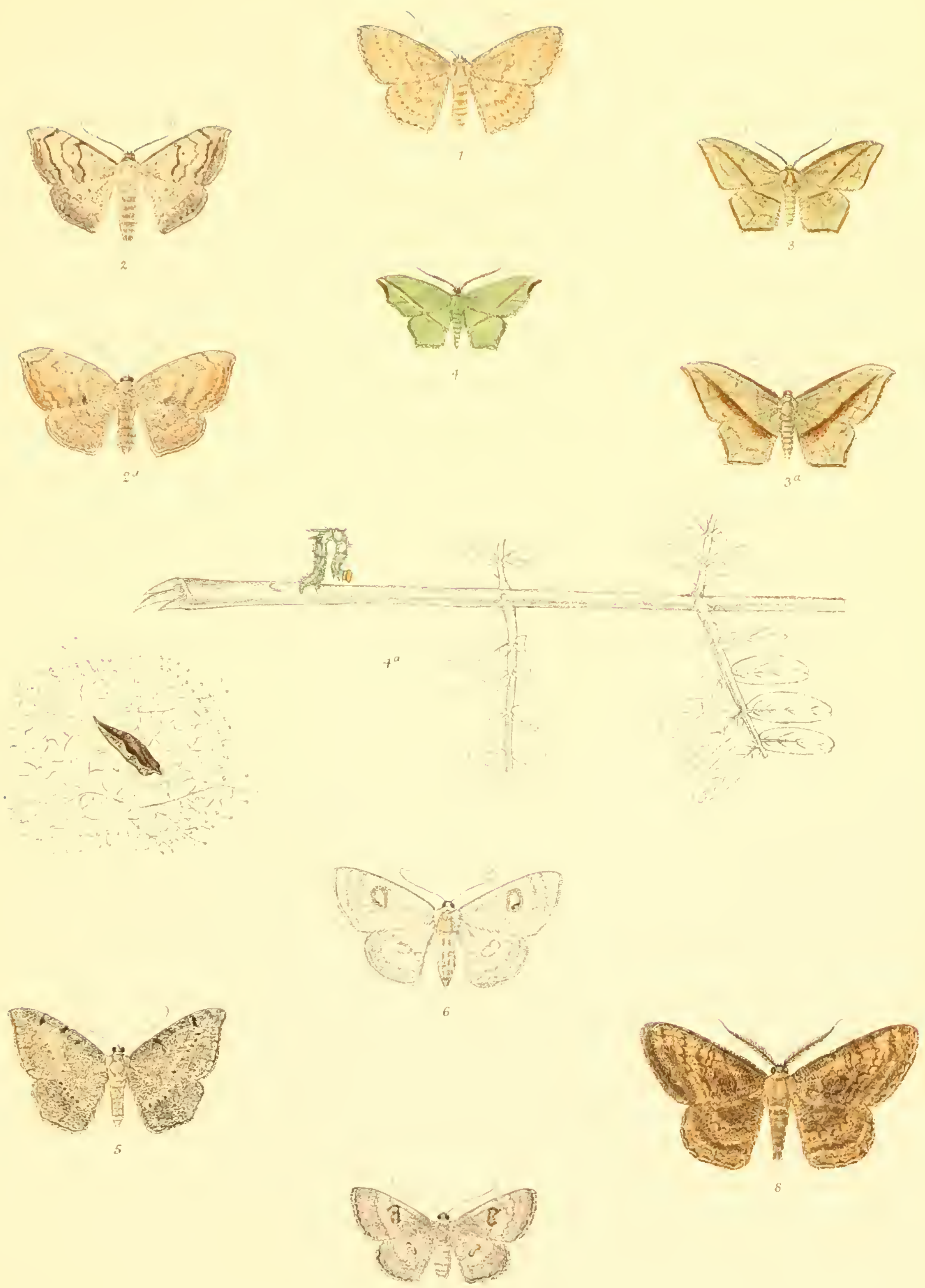
L. Reeve & Co. London



F. C. Moore del.

Vincent Brooks Day & Son Imp.

L. Reeve & Co. London



F. C. Moore del. et lith

Vincent Brooks, Day & Son Imp.

L. Reeve & C° London

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L Reeve & Co London

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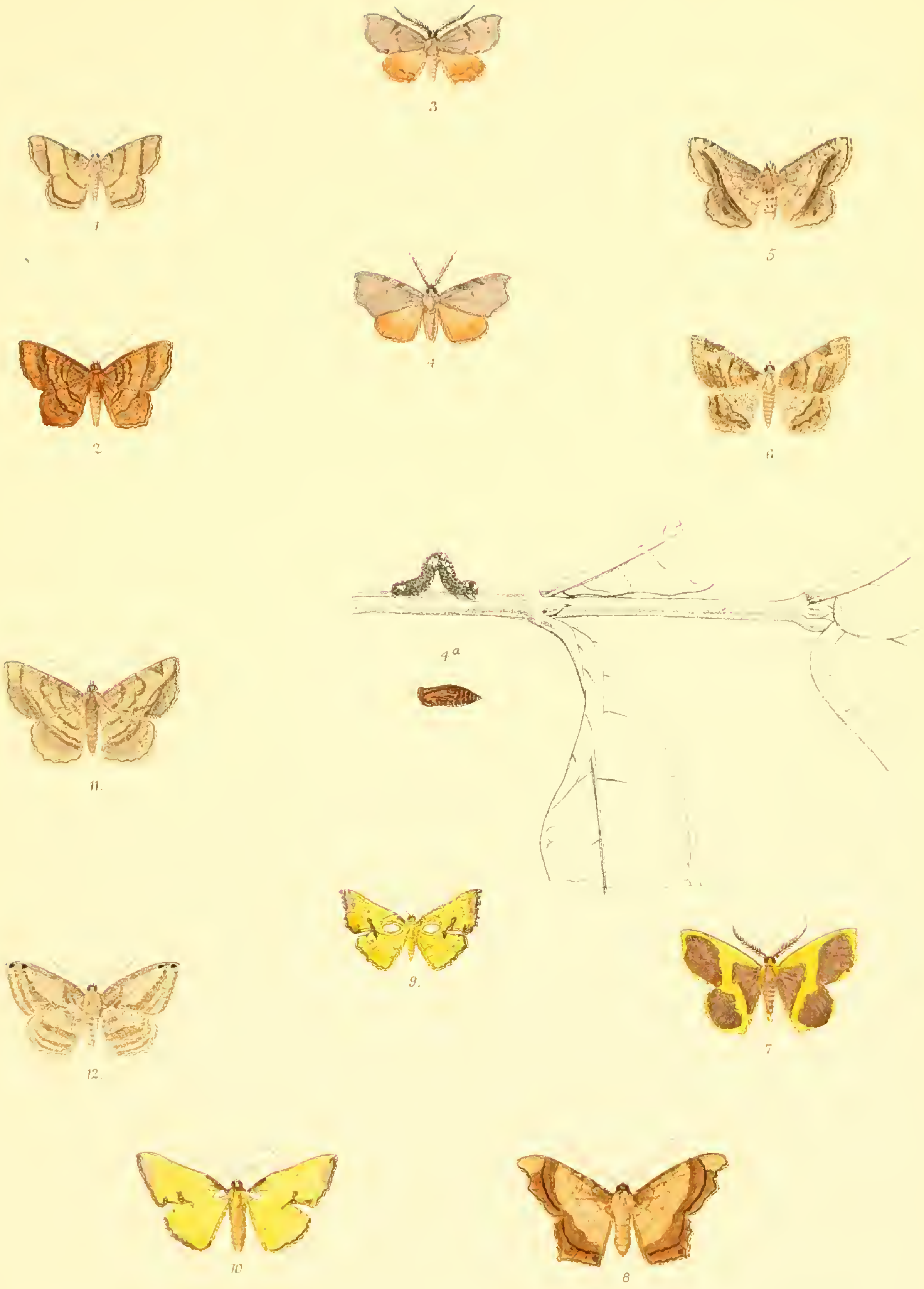
Reeve & London



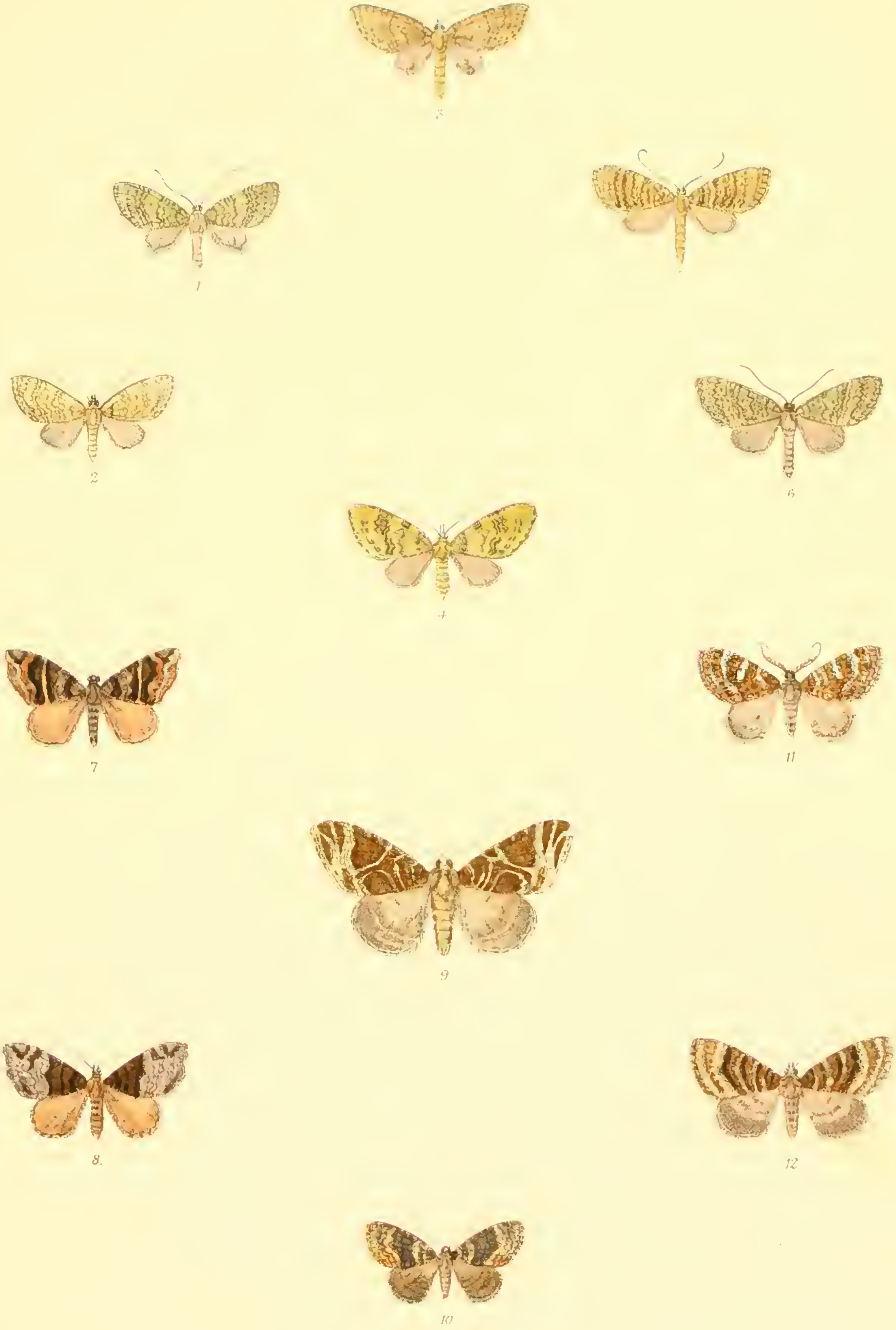
F C Moore del et lith

L Reeve & Co London

F. C. Moore del et lith

Vincent Brooks Day & Son Imp

L. Reeve & Co. London



Moore del. et lith.

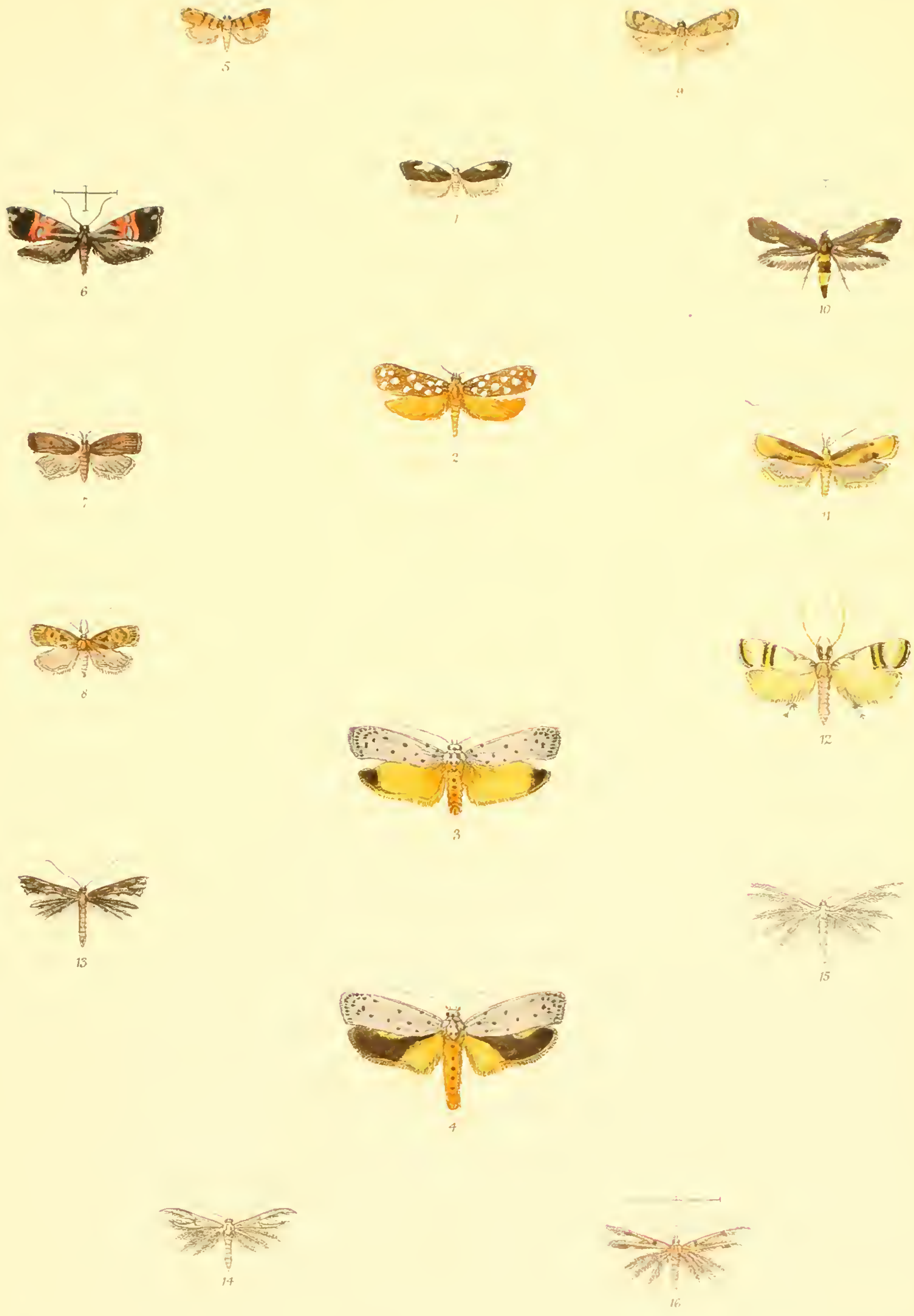
Brooks Day & Son Imp.

Reeve & Co. London

F C Moore del et lith

Vincent Brooks Day & Son Imp

L Reeve & Co London



Moore del. et lith.

Vincent Brooks, Day & Son Lith.

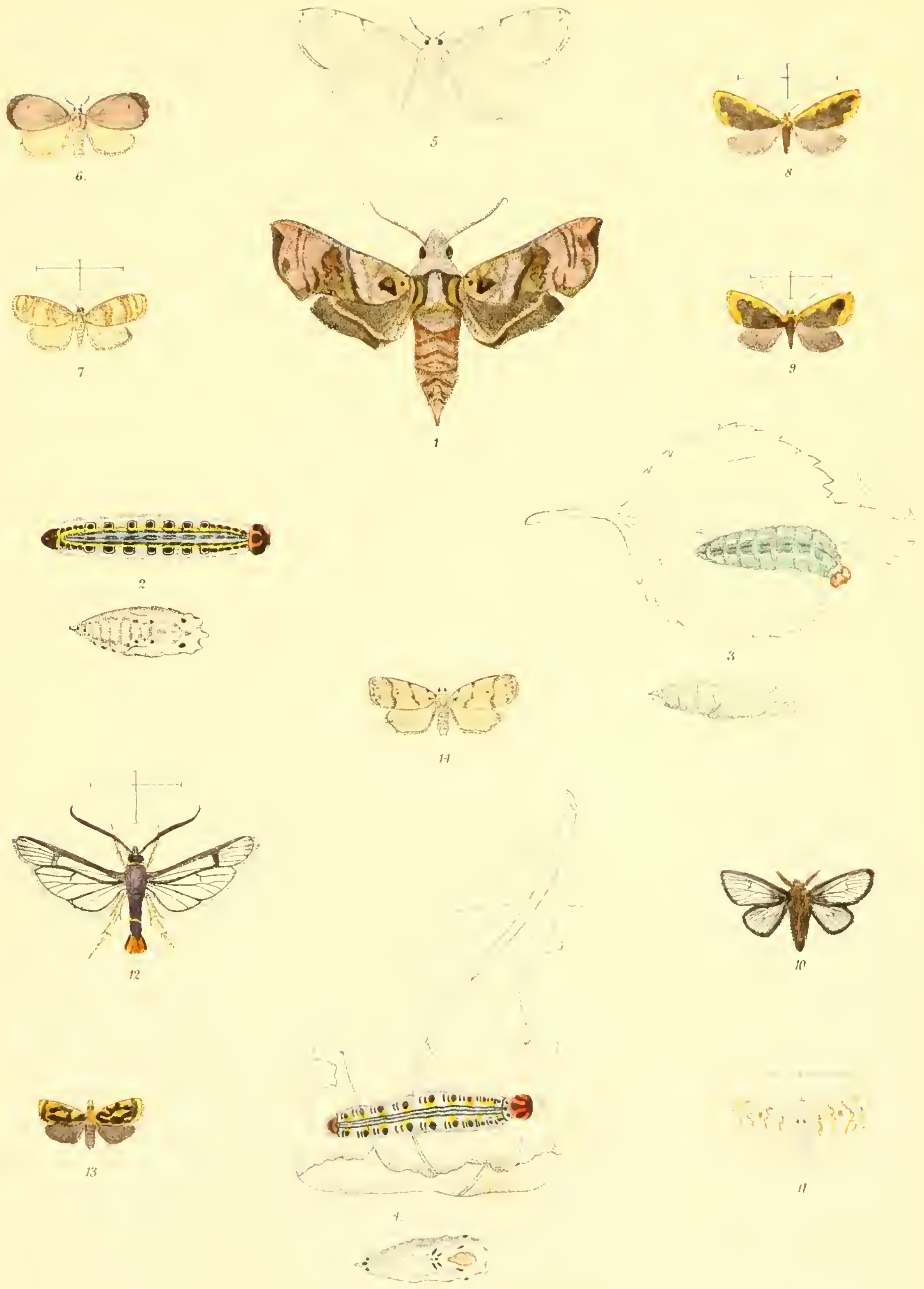
L. Reeve & Co. London

Pl. 210.

F C Moore del et lith

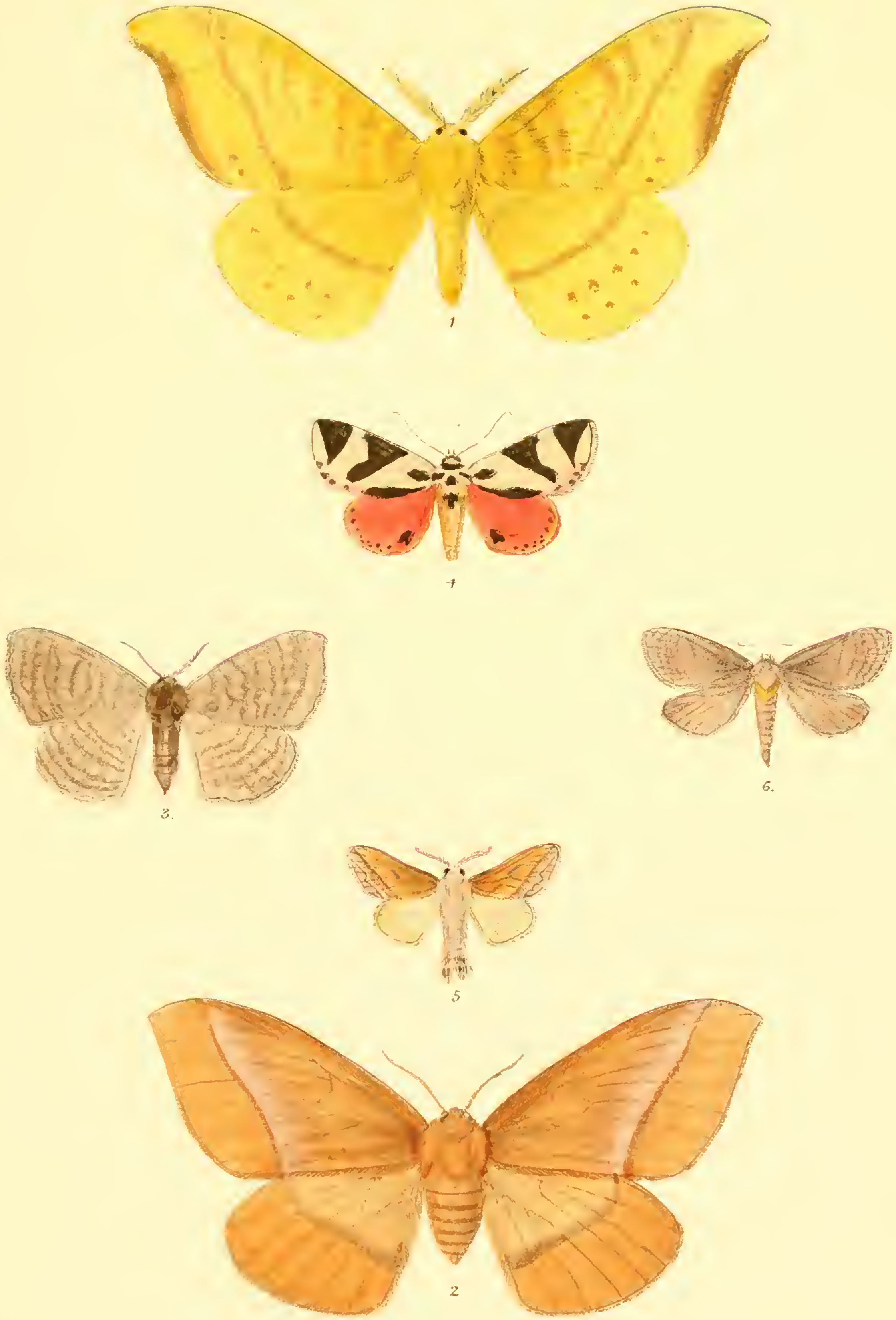
Vincent Brooks Day & Son imp

L. Reeve & Co.



E. Moore del et lith.   Vincent Brooks Day & Son Imp.

L Reeve & Co London



F. C. Moore del et lith.

Vincent Brooks, Day & Son lith.

L. Reeve & C° London

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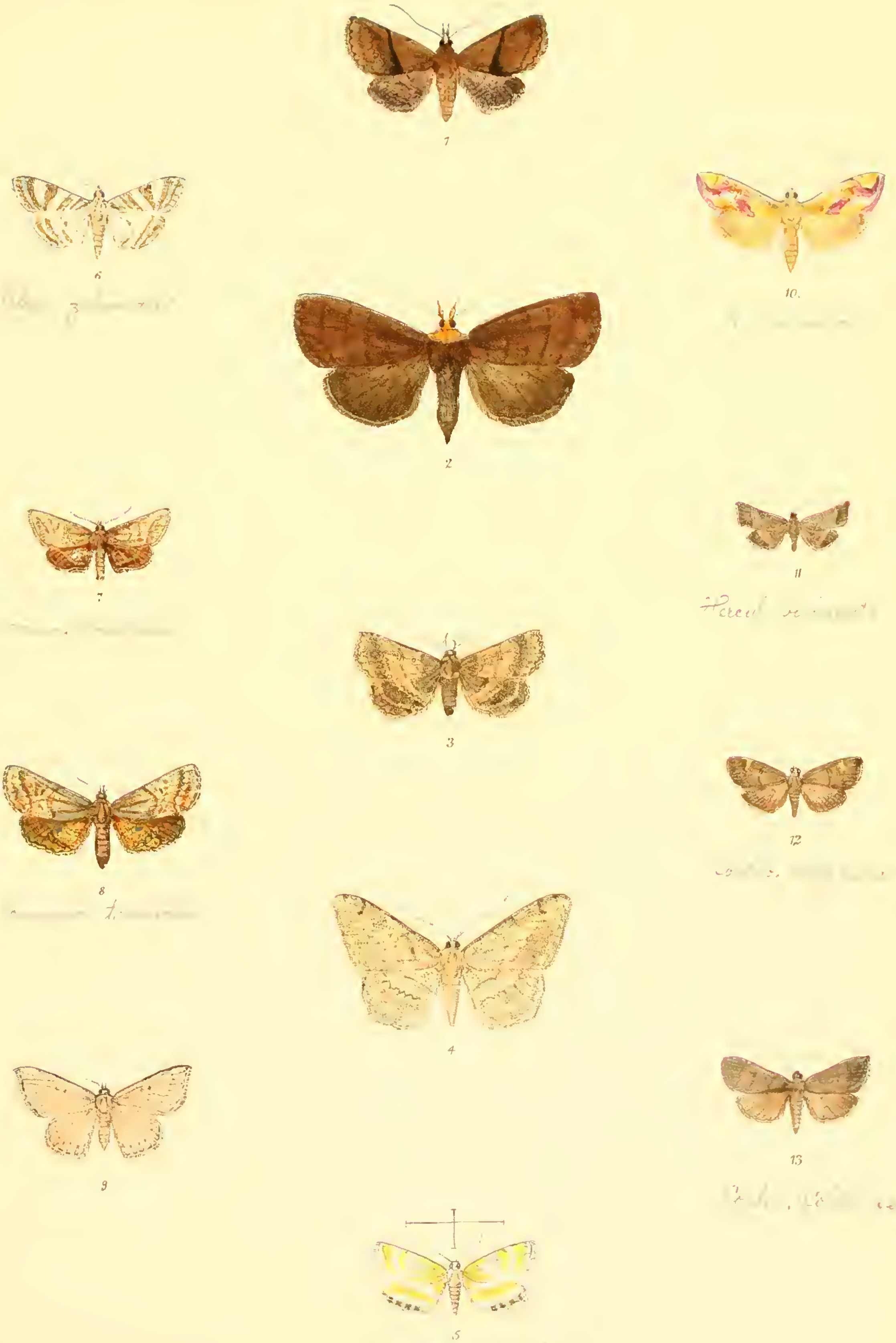
F. Moore del et lith.   Vincent Brooks Day & Son lith

L. Reeve & Co London.

Pl. 214



F C Moore del et lith

Vincent Brooks Day & Son Imp

L Reeve & Co London